```
chain nodes :
6
ring nodes :
1  2  3  5
chain bonds :
2-6
ring bonds :
1-2  1-5  2-3  3-5
exact/norm bonds :
1-2  1-5  2-3  2-6  3-5


G1:O,S,N,P

G2:Ir,Rh,Ru

Match level :
1:Atom  2:Atom  3:Atom  5:Atom  6:CLASS



L1      STRUCTURE UPLOADED

=> d his

     (FILE 'HOME' ENTERED AT 18:42:44 ON 24 MAR 2008)

     FILE 'REGISTRY' ENTERED AT 18:42:57 ON 24 MAR 2008
L1              STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1              STR
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G1 O,S,N,P

G2 Ir,Rh,Ru

Structure attributes must be viewed using STN Express query preparation.

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=> s l1
SAMPLE SEARCH INITIATED 18:43:18 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -       40 TO ITERATE

100.0% PROCESSED       40 ITERATIONS                              15 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:          421 TO     1179
PROJECTED ANSWERS:              68 TO      532

L2            15 SEA SSS SAM L1

=> s l1 full
FULL SEARCH INITIATED 18:43:23 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -      872 TO ITERATE

100.0% PROCESSED      872 ITERATIONS                             359 ANSWERS
SEARCH TIME: 00.00.01

L3           359 SEA SSS FUL L1

=> fil caplus
COST IN U.S. DOLLARS                              SINCE FILE      TOTAL
                                                     ENTRY    SESSION
FULL ESTIMATED COST                                 178.36     178.57

FILE 'CAPLUS' ENTERED AT 18:43:29 ON 24 MAR 2008
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FILE LAST UPDATED: 23 Mar 2008  (20080323/ED)
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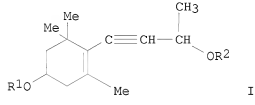
=> s l3
L4 229 L3

=> s l4 and py<=2002
2292587 PY<=2002
L5 77 L4 AND PY<=2002

=> d 1-77 bib abs

L5 ANSWER 1 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2002:963595 CAPLUS
DN 138:369073
TI Stereocontrolled synthesis of glucosidic damascenone precursors
AU Yamano, Yumiko; Watanabe, Yasuko; Watanabe, Naoharu; Ito, Masayoshi
CS Kobe Pharmaceutical University, Higashinada-ku, Kobe, 658-8558, Japan
SO Journal of the Chemical Society, Perkin Transactions 1 (2002), (24), 2833-2844
CODEN: JCSPCE; ISSN: 1472-7781
PB Royal Society of Chemistry
DT Journal
LA English
OS CASREACT 138:369073
GI



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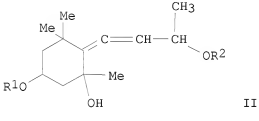


II

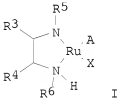
AB A stereocontrolled synthesis of optically active β-D-glucopyranosides I (R1 = H, R2 = β-D-glucopyranosyl; R1 = β-D-glucopyranosyl, R2 = H) and II (R1 = H, R2 = β-D-glucopyranosyl; R1 = β-D-glucopyranosyl, R2 = H), glucosidic damascenone precursors, was accomplished utilizing an asym. transfer hydrogenation to α,β-acetylenic ketones catalyzed by chiral ruthenium complexes as the key step.
RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2002:886005 CAPLUS
DN 137:369737
TI Stereoselective hydrogen-transfer process and chiral ruthenium-diamine complex catalyst for producing optically active β-hydroxycarboxylate esters from β-ketocarboxylate esters and hydrogen donors
IN Tada, Kenichi; Miura, Takashi
PA Takasago International Corporation, Japan
SO Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 12

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1258470	A2	20021120	EP 2002-291172	20020510 <--
	EP 1258470	A3	20030813		
	EP 1258470	B1	20050817		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2003034665	A	20030207	JP 2002-82865	20020325
	JP 4015450	B2	20071128		
	ES 2247280	T3	20060301	ES 2002-291172	20020510
	US 2003004362	A1	20030102	US 2002-142983	20020513
	US 6723871	B2	20040420		
PRAI	JP 2001-150012	A	20010518		
	JP 2002-82865	A	20020325		

OS CASREACT 137:369737; MARPAT 137:369737
GI



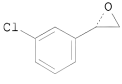
I

AB Optically active β-hydroxycarboxylate esters R1CH(OH)CH2CO2R2 [R1 = C1-10 (un)branched perfluoroalkyl or perchloroalkyl; R2 = C1-8 lower alkyl, (un)substituted benzyl; e.g., optically active Et 4,4,4-trifluoro-3-hydroxybutanoate] are prepared in high yield and selectivity by stereoselective hydrogen transfer to the corresponding β-ketocarboxylate esters R1COCH2CO2R2 (e.g., Et 4,4,4-trifluoro-3-oxobutanoate) in the presence of hydrogen donors (e.g., formic acid-triethylamine mixts.) and a chiral ruthenium-diamine complex catalyst [I; * = asym. carbon atom; R3, R4 = alkyl, Ph, (un)substituted cycloalkyl; R5 = methanesulfonyl, trifluoromethanesulfonyl, benzenesulfonyl, (un)substituted naphthyl, camphorsulfonyl, alkoxycarbonyl, (un)substituted benzoyl; R6 = H, alkyl; A = (un)substituted aromatic compound; X = halogen; e.g., RuCl[(1R,2R)-p-TsNHCH(C6H5)CH(C6H5)NH2] (p-cymene)].

L5 ANSWER 3 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2002:881458 CAPLUS
DN 139:350763
TI Product class 6: organometallic complexes of iridium
AU O'Connor, J. M.

CS Dept. of Chemistry & Biochemistry, University of California - San Diego, La Jolla, CA, 92093-0358, USA
SO Science of Synthesis (2002), 1, 617-744
CODEN: SSCYJ9
PB Georg Thieme Verlag
DT Journal; General Review
LA English
AB A review on the preparation and applications of iridium organometallic complexes.
RE.CNT 373 THERE ARE 373 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2002:844399 CAPLUS
DN 138:73126
TI Practical Synthesis of Optically Active Styrene Oxides via Reductive Transformation of 2-Chloroacetophenones with Chiral Rhodium Catalysts
AU Hamada, Takayuki; Torii, Takayoshi; Izawa, Kunisuke; Noyori, Ryoji; Ikariya, Takao
CS AminoScience Laboratories, Ajinomoto Co., Inc., Kawasaki, 210-8681, Japan
SO Organic Letters (2002), 4(24), 4373-4376
CODEN: ORLEF7; ISSN: 1523-7060
PB American Chemical Society
DT Journal
LA English
OS CASREACT 138:73126
GI



I

AB A practical method for the synthesis of optically active styrene oxides, e.g., I, has been developed via formation of optically active 2-chloro-1-phenylethanols generated by reductive transformation of ring-substituted 2-chloroacetophenones. The optically active alcs. with up to 98% ee are obtainable from the asym. reduction of acetophenones with an S/C = 1000-5000 with a formic acid triethylamine mixture containing a well-defined chiral Rh complex, Cp*RhCl[(R,R)-Tsdpen].
RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2002:559841 CAPLUS
DN 137:248006
TI Use of chiral ruthenium amido-sulfonamide complexes for controlled, enantioasymmetric polypeptide synthesis
AU Seidel, Scott W.; Deming, Timothy J.
CS Chemistry Department, University of Hawaii, Honolulu, HI, 96822-2275, USA
SO PMSE Preprints (2002), 87, 86-87
CODEN: PPMRA9; ISSN: 1550-6703
PB American Chemical Society
DT Journal; (computer optical disk)
LA English
AB Ruthenium-based amido-sulfonamide initiators provided a means to obtain control over γ-benzyl glutamate N-carboxyanhydride polymns. in the presence of phosphine that were difficult to realize in other

metallacycles based systems.
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 6 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2002:504737 CAPLUS
DN 137:63072
TI Process for producing optically active halohydrin compound by asymmetric hydrogen transfer reduction of α-halo ketones
IN Torii, Takayoshi; Hamada, Takayuki; Onishi, Tomoyuki; Izawa, Kunisuke; Ikariya, Takao; Noyori, Ryoji
PA Ajinomoto Co., Inc., Japan
SO PCT Int. Appl., 52 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002051781	A1	20020704	WO 2001-JP11105	20011218 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2002222690	A1	20020708	AU 2002-222690	20011218 <--
	EP 1346972	A1	20030924	EP 2001-271847	20011218
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	US 2004082820	A1	20040429	US 2003-450831	20030625
	US 6888012	B2	20050503		
PRAI	JP 2000-391776	A	20001225		
	JP 2001-237041	A	20010803		
	JP 2001-314619	A	20011012		
	WO 2001-JP11105	W	20011218		

OS CASREACT 137:63072; MARPAT 137:63072
GI

II

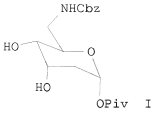
AB Disclosed is a process for producing an optically active halohydrin compound of formula YC*H(OH)CH2X [I; * represent an asym. carbon atom; X = halo; Y = aromatic hydrocarbyl, unsatd. hydrocarbyl, CRaRbY1 (wherein Ra, Rb = H, optionally substituted C1-10 alkyl, C6-15 aryl or C7-20 aralkyl optionally containing a heteroatom in the skeleton; Y1 = optionally protected NH2 or hydroxy)], characterized by subjecting an α-haloketone compound of formula YCOCH2X (X, Y = same as above) to asym. hydrogen transfer reduction in the presence of a Group 9 transition metal compound having an optionally substituted cyclopentadienyl group and of an optically active diamine compound of formula (S,S)- or (R,R)-R2C*H(NHSO2R1)(CH2)kC*H(NH2)R3 [R1 = alkyl, fluoroalkyl, (un)substituted Ph; R2, R3 = (un)substituted Ph or C1-10 alkyl or R2 and R3 are combined together to form a ring; * represents an asym. carbon atom; k = an integer of 0-3]. The asym.

hydrogen transfer reduction is preferably conducted in the presence of a base. Treatment of optically active halohydrin compound I with base for cyclization gives optically active epoxides (II; Y = same as above). Thus, a solution of 15.5 mg di-μ-chlorodichlorobis(pentamethylcyclopendadienyl)dirhodium(III) and 36.6 mg (1R,2R)-N-(p-toluenesulfonyl)-1,2-diphenylethylenediamine in 25.0 mL isopropanol was stirred at 80° for 20 min and cooled to room temperature, followed by adding 2.5 mL 0.1 M potassium tert-butoxide (0.25 mmol) and 77.3 mg 2-chloroacetophenone in 22.5 mL isopropanol, and the resulting mixture was stirred at room temperature for 14 h to give 93.6% (S)-(+)-2-chloro-1-phenylethanol (III) (97.5% ee). A solution of 156.6 mg III in 2.0 mL CH_2Cl_2 and 1.0 mL 2.0 M aqueous NaOH were mixed and stirred at room temperature for 4 h to give 95.9% (S)-styrene oxide (97.5% ee).

RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 7 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2002:403138 CAPLUS
DN 137:369562
TI Efficient ruthenium-catalyzed racemization of secondary alcohols: application to dynamic kinetic resolution
AU Dijksman, Arne; Elzinga, Jeoffrey M.; Li, Yu-Xin; Arends, Isabel W. C. E.; Sheldon, Roger A.
CS Department of Biotechnology, Biocatalysis and Organic Chemistry, Delft University of Technology, Delft, 2628 BL, Neth.
SO Tetrahedron: Asymmetry (2002), 13(8), 879-884
CODEN: TASYE3; ISSN: 0957-4166
PB Elsevier Science Ltd.
DT Journal
LA English
OS CASREACT 137:369562
AB Three new ruthenium-based catalytic systems are described which are capable of catalyzing the racemization of chiral secondary alcs. In addition, one of these systems, [TosN(CH2)2NH2]RuCl(p-cymene)/TEMPO, was able to catalyze the in situ racemization during enzymic resolution, i.e. dynamic kinetic resolution
RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 8 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2002:301244 CAPLUS
DN 137:47382
TI Enantioselective Synthesis of 2-Deoxy- and 2,3-Dideoxyhexoses
AU Haukaas, Michael H.; O'Doherty, George A.
CS Department of Chemistry, University of Minnesota, Minneapolis, MN, 55455, USA
SO Organic Letters (2002), 4(10), 1771-1774
CODEN: ORLEF7; ISSN: 1523-7060
PB American Chemical Society
DT Journal
LA English
OS CASREACT 137:47382
GI



I

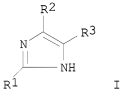
AB The enantioselective syntheses of C-6 O-TBS- and N-Cbz-protected 2-deoxy- and 2,3-dideoxy sugars, e.g. I, have been achieved in 6-8 steps from furfural. A combination of chemo-, regio-, and diastereoselective oxidation and reduction reactions produced deoxy sugars with various C-6 substitution. A key development of this route was the use of o-nitrobenzenesulfonylhydrazide (NBSH) as a diimide precursor. These overall procedures allow for the synthesis of eight deoxy sugars in either enantiomeric form.

RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 9 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2002:255941 CAPLUS
DN 136:297377
TI High conversion efficiency durable semiconductor for photoelectric converter, the photoelectric converter, and photoelectrochemical cell
IN Okubo, Kimihiko; Kita, Hiroshi
PA Konica Co., Japan
SO Jpn. Kokai Tokkyo Koho, 33 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2002100420	A	20020405	JP 2000-290467	20000925 <--
PRAI JP 2000-290467		20000925		

OS MARPAT 136:297377
GI



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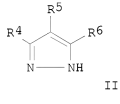


II

AB The semiconductor is sensitized with ≥1 organic metal complexes having N anion-metal cation ionic coordination bond or N- or chalcogenic atom-metal coordination bond. The anion of the complex is selected from R'N:A3A2:A1NHR [A1-3 = (substituted) methine group (-CRa:) or N; R, R' and Ra = H or substituents and may form rings], R'X8A2:A1NHR (X8 = -NRb- or chalcogen atom, Rb = H or substituent), I (R1-3 = H or substituents, with ≥1 of R1-3 containing metal cation coordinating N or chalcogen atom separated by 2-3 atoms from a N atom that forming ion coordination with a metal ion, R2 and R3 may join to form an imidazole ring), II (R4-6 = H or

substituents, with ≥1 of R4-6 containing metal cation coordinating N or chalcogen atom separated by 2-3 atoms from a N atom that forming ion coordination with a metal ion, R4 and R5 or R5 and R6 may form an imidazole ring), or condensed ring derivs. of I and II. The photoelectrochem. cell contains a photoelec. converter using the semiconductor.

L5 ANSWER 10 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2002:227355 CAPLUS
DN 136:385910
TI Enantioselective Monoreduction of 2-Alkyl-1,3-diketones Mediated by Chiral Ruthenium Catalysts. Dynamic Kinetic Resolution
AU Eustache, Florence; Dalko, Peter I.; Cossy, Janine
CS Laboratoire de Chimie Organique, CNRS, ESPCI, Paris, 75231, Fr.
SO Organic Letters (2002), 4(8), 1263-1265
CODEN: ORLEF7; ISSN: 1523-7060
PB American Chemical Society
DT Journal
LA English
OS CASREACT 136:385910
AB The reduction of 2-alkyl-1,3-diketones using (R,R)- or (S,S)-RuCl[N-(tosyl)-1,2-diphenylethylenediamine](p-cymene) in the presence of formic acid and triethylamine affords syn-2-alkyl-3-hydroxy ketones as the major products with high enantioselectivity.
RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 11 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2002:107282 CAPLUS
DN 136:150991
TI Process for producing optically active alcohol by asymmetric hydrogen-transfer reduction of ketones with chiral transition metal complex having amide compound as ligand
IN Masui, Moriyasu; Hasegawa, Yasushi
PA Shionogi & Co., Ltd., Japan
SO PCT Int. Appl., 88 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002010101	A1	20020207	WO 2001-JP6478	20010727 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRAI	JP 2000-232725	A	20000801		

OS CASREACT 136:150991; MARPAT 136:150991
AB A process for producing an optically active alc. represented by the general formula R1a'C*H(OH)R2a' (wherein R1a' and R2a' each represents hydrogen, an organic residue, or a group formed by reducing the organic residue,
provided that R1a' and R2a' may be bonded to each other to form an optionally substituted cyclic group; C* represents an asym. carbon atom) comprises reducing a carbonyl compound represented by the general formula R1aCOR2a (wherein R1a and R2a each represents hydrogen or an organic residue,

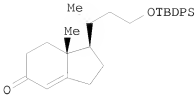
provided that R1a and R2a may be bonded to each other to form an optionally substituted cyclic group) in the presence of a chiral transition metal complex having an α-aminocarboxamide compound as a ligand and of a base and a hydrogen-donating compound A transition metal complex consisting of an α-aminocarboxamide ligand which is readily prepared from α-amino acid found to serve as an excellent catalyst for hydrogen-transfer type reduction This process gives optically active alcs. in high yields with high stereoselectivity. Thus, 73 mg tetrachlorobis(η6-mesitylene) diruthenium, 3 mL isopropanol, and 0.17 mL Et3N were added to 67 mg (S)-N-(p-toluenesulfonyl)-2-pyrrolidinecarboxamide and stirred at 80° for 4 h to give 45% chloro(η6-mesitylene)[(S)-N-(p-toluenesulfonyl)-2-pyrrolidinecarboxamide]ruthenium (I) as an orange solid. A 5:2 mixture of formic acid and triethylamine (2.5 mL) was added to a mixture of 1.49 g 2-[2-(2,5-dimethylphenoxymethyl)phenyl]-N-methyl-2-oxoacetamide, 26 mg I, and 2.5 mL DMSO and stirred at room temperature for 2 h and then at 50° for 22 h to give 100% (R)-2-[2-(2,5-dimethylphenoxymethyl)phenyl]-2-hydroxy-N-methylacetamide (86% ee).

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

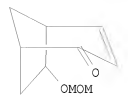
L5 ANSWER 12 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2002:106175 CAPLUS
DN 136:294599
TI Practical Synthesis of Optically Active Amino Alcohols via Asymmetric Transfer Hydrogenation of Functionalized Aromatic Ketones
AU Watanabe, Masahito; Murata, Kunihiko; Ikariya, Takao
CS Central Research Laboratory, Kanto Chemical Corp. Inc., Soka Saitama, Japan
SO Journal of Organic Chemistry (2002), 67(5), 1712-1715
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
OS CASREACT 136:294599
AB 2-Substituted acetophenones such as 2-cyano-, 2-azido-, or 2-nitroacetophenones were effectively reduced with a mixture of HCOOH/N(C2H5)3 containing a chiral Ru(II) catalyst, RuCl[(S,S)-N-(p-toluenesulfonyl)-1,2-diphenylethylenediamine](p-cymene), giving the corresponding optically active alcs., which can be converted to optically active amino alcs. with excellent ee's. Similarly, the reaction of 2-benzoylacetophenone with the same Ru catalyst gave a quant. yield of the corresponding optically active 1,3-diol with 99% ee.

RE.CNT 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 13 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2002:43090 CAPLUS
DN 136:325725
TI Concise synthesis of a steroid C/D-ring system using a bicyclo[3.2.1]octane chiral building block: A new route to 25-hydroxy-Grundmann's ketone
AU Hanada, Keisuke; Miyazawa, Norio; Nagata, Hiroshi; Ogasawara, Kunio
CS Pharmaceutical Institute, Tohoku University, aobayama, Sendai, 980-8578, Japan
SO Synlett (2002), (1), 125-127
CODEN: SYNLES; ISSN: 0936-5214
PB Georg Thieme Verlag
DT Journal
LA English
OS CASREACT 136:325725
GI



I



II

AB A concise route to a steroid C/D-ring system (I) leading to 25-hydroxy-Grundmann's ketone has been developed along with a new chemical resolution of the chiral starting material containing a bicyclo[3.2.1]octane framework (II).

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 14 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2002:33908 CAPLUS
DN 136:200294
TI Deprotonation of Organic Compounds Bearing Acid Protons Promoted by Metal Amido Complexes with Chiral Diamine Ligands Leading to New Organometallic Compounds
AU Murata, Kunihiko; Konishi, Hirokazu; Ito, Masato; Ikariya, Takao
CS Department of Applied Chemistry Graduate School of Science and Engineering, Tokyo Institute of Technology, and CREST, Japan Science and Technology Cooperation (JST), O-okayama, Meguro-ku, Tokyo, 152-8552, Japan
SO Organometallics (2002), 21(2), 253-255
CODEN: ORGND7; ISSN: 0276-7333
PB American Chemical Society
DT Journal
LA English
OS CASREACT 136:200294
AB Well-defined 16-electron metal amido complexes bearing chiral Ts-diamine [Ts-diamine = N-(p-toluenesulfonyl)-1,2-diamine] ligands readily react with nitromethane, acetone, or phenylacetylene to give new organometallic compds. in almost quant. yields. For example, an Ir amido complex, Cp*Ir[(R,R)-Tscydn] 1a, [(R,R)-Tscydn = (1R,2R)-N-(p-toluenesulfonyl)-1,2-cyclohexanediamine] reacts with nitromethane at room temperature to give quant. a nitromethyl Ir complex, Cp*Ir(CH2NO2)[(R,R)-Tscydn] 1b, as a single diastereomer. The structure of 1b and 2 other related iridium diamido complexes were determined by x-ray crystallog. (for 1b.MeNO2, space group P212121, Z = 4, Rw = 0.059). The isolable organometallic compds. with chiral amine ligands are relevant to active catalysts for asym. C-C bond formation.

RE.CNT 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 15 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2001:928095 CAPLUS
DN 136:310132
TI Highly enantioselective synthesis via dynamic kinetic resolution under transfer hydrogenation using Ru(η6-arene)-N-perfluorosulfonyl-1,2-diamine catalysts: a first insight into the relationship of the ligand's pKa and the catalyst activity
AU Mohar, Barbara; Valleix, Alain; Desmurs, Jean-Roger; Felemez, Marc; Wagner, Alain; Mioskowski, Charles
CS National Institute of Chemistry, Ljubljana, SI-1001, Slovenia
SO Chemical Communications (Cambridge, United Kingdom) (2001), (24), 2572-2573

CODEN: CHCOFS; ISSN: 1359-7345
PB Royal Society of Chemistry
DT Journal
LA English
OS CASREACT 136:310132
AB β-(3,4-Dimethoxyphenyl)serine Me ester was obtained in high diastereomeric and enantiomeric excesses under transfer hydrogenation using chiral Ru(η6-arene)-N-perfluorosulfonyl-1,2-diamine catalysts.
RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 16 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2001:917584 CAPLUS
DN 136:247678
TI Studies on the mechanism of metal-catalyzed hydrogen transfer from alcohols to ketones
AU Pamies, Oscar; Backvall, Jan-E.
CS Department of Organic Chemistry, Arrhenius Laboratory, Stockholm University, Stockholm, 10691, Swed.
SO Chemistry--A European Journal (2001), 7(23), 5052-5058
CODEN: CEUJED; ISSN: 0947-6539
PB Wiley-VCH Verlag GmbH
DT Journal
LA English
OS CASREACT 136:247678
AB The mechanism of metal-catalyzed H transfer from alcs. to ketones was studied. H transfer (H-transfer) from (S)-α-deutero-α-phenylethanol ((S)-1) to acetophenone was used as a probe to distinguish between selective C-to-C H-transfer and nonselective transfer involving both O-to-C and C-to-C H-transfer. The progress of the reaction was monitored by the decreasing enantiomeric excess of (S)-1. After complete racemization, the alc. was analyzed for its D content in the α-position, which is a measure of the degree of selectivity in the H-transfer. A number of different Rh, Ir, and Ru complexes, e.g., [(dppp)RhCl]2, (in total 21 complexes) were studied by using this probe. For all Rh complexes a high degree of retention of D at α-C (95-98%) was observed Also most Ir complexes showed a high degree of retention of D. However, the results for the Ru complexes show that there are two types of catalysts: one that gives a high degree of D retention at α-C and another that gives about half of the D content at α-C (37-40%). Two different mechanisms are proposed for transition-metal-catalyzed H transfer, one via a monohydride (giving a high D content) and another via a dihydride (giving about half of D content). As comparison nontransition-metal-catalyzed H transfer was studied with the same probe. Al- and Sm-catalyzed racemization of (S)-1 gave 75-80% retention of D in the α-position of the alc., and involvement of an electron transfer pathway was suggested to account for the loss of D.
RE.CNT 75 THERE ARE 75 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 17 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2001:899932 CAPLUS
DN 136:166931
TI Optically Pure α-(Trimethylsilyl)benzyl Alcohol: A Practical Chiral Auxiliary for Oxocarbenium Ion Reactions
AU Cossrow, Jennifer; Rychnovsky, Scott D.
CS Department of Chemistry, University of California, Irvine, CA, 92697-2025, USA
SO Organic Letters (2002), 4(1), 147-150
CODEN: ORLEF7; ISSN: 1523-7060
PB American Chemical Society
DT Journal

LA English
OS CASREACT 136:166931
AB Enantiopure (S)-α-(trimethylsilyl)benzyl alc. (98% ee) was prepared by Noyori's transfer hydrogenation of benzoyltrimethylsilane. The corresponding trimethylsilyl ether was subjected to Marko's silyl modified Sakurai conditions with a variety of aldehydes to afford homoallylic ethers in high diastereoselectivity. The practicality of the α-trimethylsilyl benzyl group as an oxocarbenium ion auxiliary was further demonstrated by its efficient deprotection or conversion to a benzyl protecting group.
RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 18 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2001:804110 CAPLUS
DN 136:102096
TI Metal-Ligand Bifunctional Catalysis: A Nonclassical Mechanism for Asymmetric Hydrogen Transfer between Alcohols and Carbonyl Compounds
AU Noyori, Ryoji; Yamakawa, Masashi; Hashiguchi, Shohei
CS Department of Chemistry and Research Center for Materials Science, Nagoya University, Chikusa, Nagoya, 464-8602, Japan
SO Journal of Organic Chemistry (2001), 66(24), 7931-7944
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
OS CASREACT 136:102096
AB Is substrate/metal complexation essential for hydrogenative saturation of unsatd. compds. No, it is not always necessary. The metal-ligand bifunctional mechanism allows for direct reduction of carbonyl compds. with an 18-electron transition metal hydride without C=O/metal interaction. Asym. transfer hydrogenation of aromatic carbonyl compounds using a 2-propanol/alkaline base system in the presence of RuCl[(S,S)-YCH(C6H5)CH(C6H5)NH2](η6-arene) (Y = O, NTs) or its analogs gives the corresponding S chiral alcs. of high enantiomeric purity. The reaction proceeds via a coordinatively saturated 18- electron complex, RuH[(S,S)-YCH(C6H5)CH(C6H5)NH2]-(η6-arene). The hydridic RuH and protic NH are simultaneously delivered to a C=O linkage via a six-membered pericyclic mechanism, giving an S alc. and RuH[(S,S)-YCH(C6H5)CH(C6H5)NH2]-(η6-arene). The latter 16-electron Ru amide complex dehydrogenates 2-propanol to regenerate the Ru hydride species. A formic acid/triethylamine mixt.formic acid/triethylamine mixture serves as a better reducing agent. The recognition of carbonyl enantiofaces in the hydrogen transfer is made largely by the attractive CH/π interaction between the η6-arene ligand and the aromatic substituent in carbonyl substrates.
RE.CNT 158 THERE ARE 158 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 19 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2001:795601 CAPLUS
DN 136:70030
TI Enantioselective Synthesis of N-Cbz-Protected 6-Amino-6-deoxymannose, -talose, and -gulose
AU Haukaas, Michael H.; O'Doherty, George A.
CS Department of Chemistry, University of Minnesota, Minneapolis, MN, 55455, USA
SO Organic Letters (2001), 3(24), 3899-3902
CODEN: ORLEF7; ISSN: 1523-7060
PB American Chemical Society
DT Journal
LA English

OS CASREACT 136:70030
AB The enantioselective synthesis of three 6-amino-6-deoxy sugars has been achieved in six to eight steps from furfural. A sequence of diastereoselective oxidation and reduction reactions produced Cbz-protected 6-aminomannose from furfuryl alc. The incorporation of a Mitsunobu reaction into the reaction sequence allows for the selective synthesis of both N-Cbz-protected 6-aminotalose and 6-aminogulose. The overall procedure allows for the synthesis of either enantiomer of these three amino sugars.
RE.CNT 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 20 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2001:498893 CAPLUS
DN 135:303632
TI Ruthenium-catalyzed asymmetric reduction of 1,3-diketones using transfer hydrogenation
AU Cossy, J.; Eustache, F.; Dalko, P. I.
CS ESPCI, Laboratoire de Chimie Organique Associe au CNRS, Paris, 75231, Fr.
SO Tetrahedron Letters (2001), 42(30), 5005-5007
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier Science Ltd.
DT Journal
LA English
OS CASREACT 135:303632
AB 1,3-Diketones were reduced to 1,3-diols by using RuCl[N-(tosyl)-1,2-(diphenylethylenediamine)(η6-arene)] in the presence of formic acid and triethylamine. 1,3-Diols were obtained in good chemical yields and with high ee when sym. diketones were reduced.
RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 21 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2001:420228 CAPLUS
DN 135:241689
TI Catalytic asymmetric Michael reactions using a chiral rhodium complex
AU Suzuki, T.; Torii, T.
CS Graduate School of Pharmaceutical Sciences, The University of Tokyo, Tokyo, Bunkyo-ku, Hongo, 113-0033, Japan
SO Tetrahedron: Asymmetry (2001), 12(7), 1077-1081
CODEN: TASYE3; ISSN: 0957-4166
PB Elsevier Science Ltd.
DT Journal
LA English
OS CASREACT 135:241689
AB Catalytic asym. Michael reaction of β-keto esters and Me vinyl ketone was achieved using a chiral diamine-based Rh complex to give the Michael adducts in up to 75% e.e.
RE.CNT 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 22 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2001:375463 CAPLUS
DN 135:288538
TI Practical synthesis of optically active alcohols by asymmetric hydrogen-transfer reduction
AU Okano, Kazuya
CS Tsukuba Res. Cent., Mitsubishi Chem. Corp., Ibaraki, 300-0813, Japan
SO Yuki Gosei Kagaku Kyokaishi (2001), 59(5), 450-451
CODEN: YGKKAE; ISSN: 0037-9980
PB Yuki Gosei Kagaku Kyokai
DT Journal; General Review

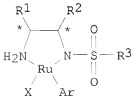
LA Japanese
AB A review with 6 refs. on asym. reduction of ketones to optical active alcs. using a chiral Ru complex catalyst.

L5 ANSWER 23 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2001:290361 CAPLUS
DN 135:77006
TI Stereocontrolled Synthesis of cis-Dibenzoquinolizine Chlorofumarates: Curare-Like Agents of Ultrashort Duration
AU Kaldor, Istvan; Feldman, Paul L.; Mook, Robert A., Jr.; Ray, John A.; Samano, Vicente; Sefler, Andrea M.; Thompson, James B.; Travis, Benjamin R.; Boros, Eric E.
CS Division of Medicinal Chemistry, GlaxoSmithKline Research & Development, Research Triangle Park, NC, 27709, USA
SO Journal of Organic Chemistry (2001), 66(10), 3495-3501
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
OS CASREACT 135:77006
AB Cis-Dibenzoquinoliziniumpropanols were prepared stereoselectively and were transformation into bis- and mixed-onium chlorofumarates. The title compds. displayed curare-like effects of ultrashort duration in rhesus monkeys.
RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 24 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2001:270196 CAPLUS
DN 134:316678
TI Ruthenium catalyst composition for asymmetric hydrogen transfer reduction reactions
IN Okano, Kazuya; Miyagi, Miwa
PA Mitsubishi Chemical Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2001104795	A	20010417	JP 1999-290699	19991013 <--
PRAI JP 1999-290699		19991013		

OS MARPAT 134:316678
GI



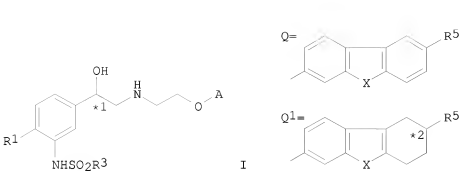
AB The Ru catalyst composition comprises a N,N'disulfonyl-1,2-diamine R3S(:O)2NHC*R1-C*R2NHS(:O)2R3 (R1,2 = C1-12 alkyl, aryl; R3 = C≤20 alkyl, aryl; * = asym. carbon atom) 0.1-20% and a Ru complex I (X = halo;

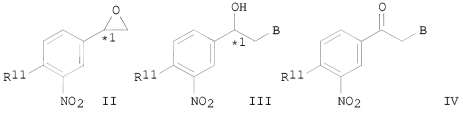
Ar = aryl) 80-99.9%.

L5 ANSWER 25 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2001:185720 CAPLUS
DN 134:222624
TI Processes for the preparation of tricyclic amino alcohol derivatives
IN Matsubara, Koki; Ishii, Naoyuki; Ogawa, Masami
PA Asahi Kasei Kabushiki Kaisha, Japan
SO PCT Int. Appl., 77 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2001017962	A1	20010315	WO 2000-JP5561	20000818	<--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW					
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
	CA 2383757	A1	20010315	CA 2000-2383757	20000818	<--
	EP 1209150	A1	20020529	EP 2000-953514	20000818	<--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL					
	BR 2000013717	A	20020702	BR 2000-13717	20000818	<--
	MX 2002PA02283	A	20020730	MX 2002-PA2283	20020301	<--
	NO 2002001066	A	20020503	NO 2002-1066	20020304	<--
	US 6696573	B1	20040224	US 2002-70249	20020304	
	US 2003225289	A1	20031204	US 2003-458675	20030611	
PRAI	JP 1999-250848	A	19990903			
	JP 2000-30826	A	20000208			
	WO 2000-JP5561	W	20000818			
	US 2002-70249	A3	20020304			

OS CASREACT 134:222624; MARPAT 134:222624
GI





AB A process for the preparation of tricyclic amino alc. derivs. (I; R1 = H, halo, OH; R3 = lower alkyl, CH2Ph; *1 represents an asym. carbon atom.; A = Q, Q1; X = NH, O, S; R5 = H, OH, NH2, acetylamino; when R5 is not H, *2 represents an asym. carbon atom.) are prepared through intermediates represented by general formula (II, III, and IV) (wherein R11 = H, halo, protected OH; B = Cl, Br; 1* represents an asym. carbon atom.). The intermediates such as 2-Halo-1-(3-nitrophenyl)ethanone derivs. IV and 1-(3-nitrophenyl)oxirane derivs. II are easy of purification, and particularly optically active II are effective in enhancing the optical purities of the final products. These tricyclic amino alc. derivs. I including 2-[N-[2-(9H-carbazol-2-yloxy)ethyl]amino]-1-[(3-methylsulfonylamino)phenyl]ethanol (V) are useful in the treatment of diabetes, obesity, hyperlipemia and so on (no data). Thus, a solution of 3'-nitroacetophenone in CH2Cl2/MeOH was treated dropwise with a solution of SO2Cl2 in CH2Cl2 over a period of 1 h and stirred at room temperature for 1 h to give 3'-nitro-2-chloroacetophenone which was reduced by HCO2H/Et3N (5:2 complex) in the presence of chloro[(S,S)-N-methanesulfonyl-1,2-diphenylethylenediamine] (p-cymene)ruthenium complex in 2-propanol at room temperature for 22 h to give (R)-1-(3-nitrophenyl)-2-chloroethanol. A solution of the latter compound in 2-propanol was treated dropwise with 2 N aqueous NaOH over a period of 20 min and stirred at room temperature for 30 min to give (2R)-2-(3-nitrophenyl)oxirane which was heated with 2-(2-benzylaminoethoxy)carbazole in 2-butanol at 95° under stirring for 8 h to give (R)-1-(3-nitrophenyl)-2-[N-[2-(carbazol-2-yloxy)ethyl]-benzylamino]ethanol. The latter compound was hydrogenated over platinum oxide in MeOH under normal pressure hydrogen atmospheric at room temperature for 4 h to give (R)-1-(3-aminophenyl)-2-[N-[2-(carbazol-2-yloxy)ethyl]-benzylamino]ethanol. A solution of the latter compound in THF was treated with pyridine, cooled to 0°, treated dropwise with MeSO2Cl over a period of 15 min, and stirred at 0° for 4 h to give (R)-1-(3-(methanesulfonylamino)phenyl)-2-[N-[2-(carbazol-2-yloxy)ethyl]-benzylamino]ethanol which was dissolved in ethanol and hydrogenated over 10% Pd-C under normal pressure hydrogen atmospheric at 70° for 4 h to give (R)-V.

RE.CNT 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 26 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2001:155152 CAPLUS
DN 135:5495
TI Stereoselective synthesis of 3-substituted phthalides via asymmetric transfer-hydrogenation using well-defined ruthenium catalysts under neutral conditions
AU Everaere, K.; Scheffler, J.-L.; Mortreux, A.; Carpentier, J.-F.
CS Groupe de Chimie Organique Appliquee, Laboratoire de Catalyse de Lille Associe au CNRS, Ecole Nationale Superieure de Chimie de Lille, Villeneuve d'Ascq, Fr.
SO Tetrahedron Letters (2001), 42(10), 1899-1901
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier Science Ltd.
DT Journal
LA English
OS CASREACT 135:5495
AB The asym. transfer-hydrogenation of Me 2-acylbenzoates and iso-Pr 3-acetylpyridine-2-carboxylate in 2-propanol, in the absence of base, with preformed Ru diamido or alkoxy-amido complex catalysts provides 3-alkylphthalides in high yields and 92-97% ee. The procedure is, however, not as efficient for the preparation of optically active 3-phenylphthalide.
RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 27 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2001:152559 CAPLUS
DN 134:209674
TI Surface-confined catalytic compositions
IN Ying, Jackie Y.; Mehnert, Christian P.; Lettow, John S.; Huang, Dejian
PA Massachusetts Institute of Technology, USA
SO PCT Int. Appl., 52 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001014060	A2	20010301	WO 2000-US40744	20000825 <--
	WO 2001014060	A3	20010712		
	W: CA, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 6544923	B1	20030408	US 2000-648928	20000825
PRAI	US 1999-150672P	P	19990825		

AB The present invention provides a novel catalytic system comprising catalysts immobilized on ultra-large mesoporous compns., and particularly compns. having a large percentage of pores with a mean diameter ≥50 A. Such compns. include silicates covalently bound to a ligand that in turn can covalently bind an organometallic fragment. For asym. organometallic catalysts, the catalyst is bound to the mesoporous composition via an achiral ligand. The catalytic reactions include hydrogenation, hydroformylation, carbonylation and carbon-carbon coupling reactions, such as Heck or Suzuki reactions. The present invention provides catalyst for performing asym. reactions to achieve products of high stereoselectivities. The present invention also relates to ionically immobilized catalysts. In addition, the large pore sizes of these compns. can be used for polymerization reactions where the pore sizes can be tuned to achieve a particular mol. weight distribution.

Other uses of the porous compns. include support materials for combinatorial chemical

L5 ANSWER 28 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2001:50622 CAPLUS
DN 134:115849
TI Process for the preparation of tricyclic amino alcohol derivatives
IN Miyoshi, Shiro; Matsubara, Koki
PA Asahi Kasei Kogyo Kabushiki Kaisha, Japan
SO PCT Int. Appl., 70 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2001004092	A1	20010118	WO 2000-JP4015	20000620	<--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
	CA 2377760	A1	20010118	CA 2000-2377760	20000620	<--
	EP 1195371	A1	20020410	EP 2000-937319	20000620	<--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, MC, IE, SI, LT, LV, FI, RO					
	NO 2002000073	A	20020311	NO 2002-73	20020108	<--
PRAI	JP 1999-195519	A	19990709			
	WO 2000-JP4015	W	20000620			

OS CASREACT 134:115849; MARPAT 134:115849
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A novel process for the preparation of tricyclic amino alc. derivs. of general formula [I; wherein R1 = lower alkyl, benzyl; *1 represents an asym. carbon atom; R2 = H, halo, HO; and A is a substituent represented by general formula Q or Q1 (wherein X = NH, O, S; R6 = H, hydroxyl, amino, acetylamino; and *2 represents an asym. carbon atom when R6 is not hydrogen)] or salts thereof comprises, e.g. chlorination of acetophenone derivs. (II; X = H; R1 = same as above; R21 = H, halo, protected OH; R3 = amino-protecting group) to α-chloroacetophenone derivs. II (X = Cl; R1, R3, R21 = same as above), reduction to chlorohydrins (III; R = Cl; R1, R21, R3, *1 = same as above), alkali treatment of the chlorohydrins for cyclization to epoxides (IV; R1, R21, R3, *1 = same as above), ring-opening addition reaction of the epoxides with ethanolamines represented by formula R4NHCH2CH2OH (R4 = amino-protecting group) to obtain dialc. III (R = NR4CH2CH2OH; R1, R21, R3, R4 , *1 = same as above), bromination of the primary alc., and etherification with A1-OH (A1 = Q, Q1; wherein R6 = H, protected OH or NH or AcNH; *2 = same as above) to obtain III (R = NR4CH2CH2OA1; A1, R1, R21, R3, R4, *1, *2 = same as above) followed by deprotection. The compds. I are useful in the treatment and prevention of diabetes, obesity, hyperlipemia and so on (no data). Thus, chlorination of 3'-(N-benzyl-N-methylsulfonylamino)acetophenone by SO2C12 in CH2C12 at room temperature to 2-chloro-1-[3-(N-benzyl-N-methylsulfonylamino)phenyl]ethanon

e followed by stereoselective reduction with formic acid-triethylamine complex in the presence of [(S,S)-N-(p-toluenesulfonyl)-1,2-diphenylethylenediamine](p-cymene)ruthenium complex in THF at room temperature for 4 h gave (R)-2-chloro-1-[3-(N-benzyl-N-methylsulfonylamino)phenyl]ethanol. Cyclization of the latter chlorohydrin with K2CO3 in acetone under reflux for 5 h to (R)-1-[3-(N-benzyl-N-methylsulfonylamino)phenyl]oxirane and ring-opening amination of the epoxide with N-benzylethanolamine at 100° for 13 h gave (R)-2-[N'-benzyl-N'-(2-hydroxyethyl)amino]-1-[3-(N-benzyl-N-methylsulfonylamino)phenyl]ethanol followed by bromination with N-bromosuccinimide and Ph3P in THF at -15° for 1b min and etherification of (R)-2-[N'-benzyl-N'-(2-hydroxyethyl)amino]-1-[3-(N-benzyl-N-methylsulfonylamino)phenyl]ethyl bromide with 2-hydroxycarbazole in a mixture of 2 N NaOH and THF at room temperature for 5 h gave (R)-2-[N'-benzyl-N'-[2-(9H-carbazol-2-yloxy)ethyl]amino]-1-[3-(N-benzyl-N-methylsulfonylamino)phenyl]ethanol. Hydrogenolysis of the latter compound over Pd(OH)2/C at room temperature overnight followed by treatment with 0.1 N HCl/ethanol gave (R)-2-[[2-(9H-carbazol-2-yloxy)ethyl]amino]-1-[3-(methylsulfonylamino)phenyl]ethanol hydrochloride.

RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 29 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2001:15794 CAPLUS
DN 134:237627
TI Biomimetic catalysis with immobilized organometallic ruthenium complexes: substrate- and regioselective transfer hydrogenation of ketones
AU Polborn, Kurt; Severin, Kay
CS Institut fur Anorganische Chemie der Universitat, Munchen, 81377, Germany
SO Chemistry--A European Journal (2000), 6(24), 4604-4611
CODEN: CEUJED; ISSN: 0947-6539
PB Wiley-VCH Verlag GmbH
DT Journal
LA English
OS CASREACT 134:237627
AB Chloro-(η6-arene) complexes of Ru(II) with N-sulfonyl-1,2-ethylenediamine ligands that have one or two styrene side chains were synthesized and characterized. The chloro ligand was substituted with a diphenylphosphinato ligand and the resulting organometallic complexes are transition state analogs for the Ru-catalyzed transfer hydrogenation of benzophenone. Following the protocol of mol. imprinting, these complexes were copolymd. with ethylene glycol dimethacrylate (EGDMA) in the presence of a porogen. The polymers were ground and sieved, and the phosphinato ligand was substituted with a chloro ligand, thus generating a shape-selective cavity in close proximity to the catalytically active metal center. When tested for their ability to catalyze the reduction of benzophenone, the imprinted polymers showed a significantly higher activity (up to a factor of seven) than control polymers without cavities. Out of a mixture of seven different aromatic and aliphatic ketones, benzophenone was preferentially reduced when the imprinted polymer was used. Also, the specificity of the catalyst for diaryl ketones was confirmed in a reaction with a bifunctional substrate, 4-acetyl-benzophenone; the diaryl ketone was reduced faster with the imprinted catalyst than the acetyl group. The opposite regioselectivity was observed with the control polymer. Both the activity and the selectivity of the imprinted catalysts are dependent on how the Ru complexes are attached to the polymer backbone. A double connection proved to give superior results.

RE.CNT 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 30 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2000:865353 CAPLUS

DN 134:29131
TI Method for preparation of optically active 3-pentyn-2-ol
IN Takehara, Jun; Watanabe, Yoshiji; Ichikawa, Shuji
PA Mitsubishi Chemical Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2000344694	A	20001212	JP 1999-153489	19990601 <--
PRAI JP 1999-153489		19990601		

OS CASREACT 134:29131; MARPAT 134:29131
AB Optically active 3-pentyn-2-ol, which is useful as an intermediate for drugs, is industrially prepared in high chemical and optical yields by hydrogen-transfer asym. reduction of 3-pentyn-2-one with formic acid in the presence of a base and a catalyst consisting of a combination of group VII metal compound and an asym. ligand represented by formula R6NHC*HR3C*HR4NHR5 [R3, R4 = (un)substituted alkyl, aryl, or aromatic heterocyclyl; or R3 and R4 are combined or condensed together to form a ring; R5, R6 = H, lower alkyl, acyl, CONH2, thioacyl, thiocarbamoyl, alkyl, arylsulfonyl; * represents an asym. carbon atom]. Thus, 1.94 g 3-pentyn-2-one, 6.4 mL MeCN, 75 mg (R,R)-N-p-toluenesulfonyl-1,2-diphenylethylenediamine-ruthenium(p-cymene)Cl complex (RR-TsDPEN-RuCl) (preparation given) were successively added to a 3.74 g portion of a mixture of 21.2 g formic acid and 20.2 g Et3N and stirred at room temperature for 31 h to give 49% (R)-3-pentyn-2-ol (>94% ee).

L5 ANSWER 31 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2000:863163 CAPLUS
DN 134:147755
TI Stereocontrolled synthesis of optically active β-D-glucopyranosides of 3-hydroxy-7,8-didehydro-β-ionol
AU Yamano, Yumiko; Watanabe, Yasuko; Watanabe, Naoharu; Ito, Masayoshi
CS Kobe Pharmaceutical University, Kobe, 658-8558, Japan
SO Chemical & Pharmaceutical Bulletin (2000), 48(12), 2017-2018
CODEN: CPBTAL; ISSN: 0009-2363
PB Pharmaceutical Society of Japan
DT Journal
LA English
OS CASREACT 134:147755
AB A stereocontrolled synthesis of optically active β-D-glucopyranosides of 3-hydroxy-7,8-didehydro-β-ionol utilizing an asym. transfer hydrogenation to α,β-acetylenic ketones catalyzed by chiral ruthenium complexes as the key step is described.
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

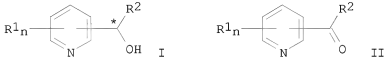
L5 ANSWER 32 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2000:836355 CAPLUS
DN 134:147475
TI Stereoselective synthesis of optically active pyridyl alcohols via asymmetric transfer hydrogenation of pyridyl ketones
AU Okano, K.; Murata, K.; Ikariya, T.
CS Tsukuba Research Center, Mitsubishi Chemical Corporation, Ibaraki, Inashiki, Ami, Chuo, 300-03, Japan
SO Tetrahedron Letters (2000), 41(48), 9277-9280
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier Science Ltd.
DT Journal
LA English

OS CASREACT 134:147475
AB A chiral Ru(II) complex, RuCl[(S,S)-N-(p-toluenesulfonyl)-1,2-diphenylethylenediamine](p-cymene), serves as an efficient catalyst for asym. transfer hydrogenation of 2-acetylpyridine with a substrate to catalyst molar ratio of 200-1000 with HCOOH as a hydrogen source to give (S)-1-(2-pyridyl)ethanol in an almost quant. yield and with 95% ee.
RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 33 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2000:833284 CAPLUS
DN 134:17401
TI Preparation of optical active pyridyl alcohols
IN Okano, Kazuya
PA Mitsubishi Chemical Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2000327659	A	20001128	JP 2000-39029	20000217 <--
PRAI JP 1999-67901	A	19990315		

OS CASREACT 134:17401; MARPAT 134:17401
GI



AB Title compds. I (R1 = H, halo, lower alkyl, lower alkynyl, lower alkenyl, (un)substituted Ph, aromatic heterocyclyl, etc.; n = 1-4; R2 = lower alkyl, lower alkenyl, lower alkynyl, (un)substituted Ph, aromatic heterocyclyl) are prepared by asym. reduction of acylpyridines II (R1, R2, x = same as I) with H donors in the presence of catalysts containing Group VIII metal compds. and asym. ligands R6NHCHR3CHR4NHR5 (R3, R4 = (un)substituted alkyl, aryl, aromatic heterocyclyl; R3R4 may form ring; R6, R6 = H, lower alkyl, acyl, carbamoyl, thioacyl, etc). 2-Acetylpyridine was reacted in the presence of catalysts prepared from [RuCl2(cymene)]2 and (S,S)-p-toluenesulfonyldiphenylethylenediamine in formic acid/NEt3 at room temperature for 48 h to give 97% 1-(2-pyridyl)ethanol.

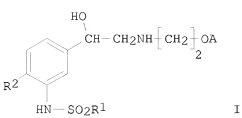
L5 ANSWER 34 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2000:786264 CAPLUS
DN 134:115515
TI Stereoselective synthesis of optically active α-hydroxy ketones and anti-1,2-diols via asymmetric transfer hydrogenation of unsymmetrically substituted 1,2-diketones
AU Koike, Takashi; Murata, Kunihiko; Ikariya, Takao
CS Graduate School of Science and Engineering Tokyo Institute of Technology, CREST, Japan Science and Technology Corporation, Meguro-ku, Tokyo, 152-8552, Japan
SO Organic Letters (2000), 2(24), 3833-3836
CODEN: ORLEF7; ISSN: 1523-7060
PB American Chemical Society

DT Journal
LA English
OS CASREACT 134:115515
AB A well-defined chiral Ru catalyst RuCl(N-(p-toluenesulfonyl)-1,2-diphenylethylenediamine)(η6-p-cymene) effectively promotes asym. transfer hydrogenation of 1-aryl-1,2-propanedione with HCO2H/NEt3, leading preferentially to optically active 1-aryl-2-hydroxy-1-propanone with up to 99% ee and 89% yield at 10°C. The reaction at 40°C gives anti-1-aryl-1,2-propanediol with up to 95% ee and 78% yield. This is a highly efficient procedure for the synthesis of optically active anti-diols.
RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

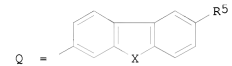
L5 ANSWER 35 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2000:725614 CAPLUS
DN 133:296377
TI Method for the preparation of tricyclic amino alcohol derivatives through azides
IN Matsubara, Koki; Kida, Hitoshi
PA Asahi Kasei Kogyo Kabushiki Kaisha, Japan
SO PCT Int. Appl., 92 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

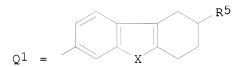
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000059885	A1	20001012	WO 2000-JP1767	20000323 <--
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2365503	A1	20001012	CA 2000-2365503	20000323 <--
	EP 1174426	A1	20020123	EP 2000-911300	20000323 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	NO 2001004781	A	20011116	NO 2001-4781	20011001 <--
PRAI	JP 1999-95430	A	19990401		
	WO 2000-JP1767	W	20000323		

OS CASREACT 133:296377; MARPAT 133:296377
GI



I





AB Tricyclic amino alc. derivs. represented by general formula [I; wherein R1 is lower alkyl or benzyl; *1 represents an asym. carbon atom; R2 is hydrogen, halogeno or hydroxyl; and A is a substituent represented by general formula Q or Q1 (wherein X is NH, O, or S; R5 is hydrogen, hydroxyl, amino, or acetylamino; and *2 represents an asym. carbon atom when R5 is not hydrogen)] are prepared via asym. reduction of phenacyl azides (II; R21 is hydrogen, halogeno or (un)protected hydroxyl; R3 is hydrogen or amino-protecting group; and R1 is lower alkyl or benzyl) to chiral azido alcs. (III) or amino alcs. (IV; R21, R1, R3 are same as above). This process makes it possible to prepare the derivs. I by a short, easy, inexpensive, and practical production process excellent in industrial workability. Compds. I are useful in the treatment and prevention of diabetes, obesity, hyperlipidemia, and so on (no data). Thus, 58 mg [(S,S)-N-methanesulfonyl-1,2-diphenylethylenediamine](p-cymene)ruthenium (preparation given) was added to a solution of 3.6 g 2-azido-1-(4-benzyloxy-3-methylsulfonylaminophenyl)ethanone (preparation given) in 2.5 mL formic acid/triethylamine solution (Fluka) in 6.5 mL THF and stirred at 5° for 43 h to give 95.0% (R)-2-azido-1-(4-benzyloxy-3-methylsulfonylaminophenyl)ethanol (94.2 %e.e.). In another example, 2-amino-1-(4-benzyloxy-3-methylsulfonylaminophenyl)ethanone hydrochloride (1.0 g) and 2 μL Et3N were added to a solution of 133 mg chloro(1,5-cyclooctadiene)rhodium(II) dimer and 397 mg (2R,4R)-N-(tert-butoxycarbonyl)-4-dicyclohexylphosphino-2-diphenylphosphinopyrrolidine and stirred under hydrogen atmospheric at room temperature for 24 h to give 94.0% (R)-2-amino-1-(4-benzyloxy-3-methylsulfonylaminophenyl)ethanol (V). Reductive benzylation of V with benzaldehyde in the presence of PtO2 under hydrogen atmospheric at room temperature for 15 h followed by amidation with (9H-carbazol-2-yloxy)acetic acid using DCC in THF at room temperature for 24 h, borane reduction in THF, and hydrogenolysis over 10% Pd-C in MeOH gave (R)-2-[N-[2-(9H-carbazol-2-yloxy)]ethyl]amino-1-

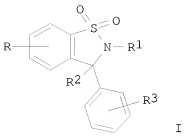
(4-hydroxy-3-methylsulfonylaminophenyl)ethanol.
RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 36 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2000:703424 CAPLUS
DN 134:29158
TI Asymmetric Transfer Hydrogenation of Benzaldehydes
AU Yamada, Issaku; Noyori, Ryoji
CS Department of Chemistry and Research Center for Materials Science, Nagoya University, Chikusa Nagoya, 464-8602, Japan
SO Organic Letters (2000), 2(22), 3425-3427
CODEN: ORLEF7; ISSN: 1523-7060
PB American Chemical Society
DT Journal
LA English
OS CASREACT 134:29158
AB A combined system of RuCl[(R,R)-YCH(C6H5)CH(C6H5)NH2](η6-arene) (Y = NSO2C6H4-4-CH3 or O) and potassium tert-butoxide catalyzes the asym. transfer hydrogenation of various benzaldehyde-1-d derivs. with 2-propanol to yield (R)-benzyl-1-d alcs. in 95-99% ee and with >99% isotopic purity. Reaction of benzaldehydes with a DCO2D-triethylamine mixture and the R,R catalyst affords the S deuterated alcs. in 97-99% ee.
RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 37 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2000:688088 CAPLUS
DN 133:266843
TI Preparation of arylsultams as HIV reverse transcriptase inhibitors
IN Mao, Jianmin; Baker, David C.
PA University of Tennessee Research Corporation, USA
SO PCT Int. Appl., 68 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000056332	A1	20000928	WO 2000-US7892	20000324 <--
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 6458962	B1	20021001	US 1999-413054	19991001 <--
PRAI	US 1999-126252P	P	19990325		
	US 1999-150132P	P	19990820		
	US 1999-413054	A	19991001		

OS CASREACT 133:266843; MARPAT 133:266843
GI



I

AB Title compound enantiomers [I; R = H or Me; R1 = H, alkyl, Ph; RR2 = H; R3 = H, halo, OMe, Ph, etc.] were prepared by reduction of I (R1R2 = bond) in the presence of chiral reduction catalysts. Thus, 3-MeC6H4MgCl was condensed with saccharin and the product dehydrated to give I (R = H, R3 = 3-Me)(II; R1R2 = bond) which was treated with HCO2H/Et3N in the presence of (S)-RhClCp*[(1R,2R)-N-p-TsNCHPhCHPhNH2](preparation given) to give (+)-II (R1 = R2 = H) of 95% ee. Data for biol. activity of I were given.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 38 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2000:653711 CAPLUS
DN 133:237676
TI Method for preparation of optically active 1,2-diols by stereoselective reduction of α-hydroxy ketones
IN Okano, Kazuya; Iwane, Hiroshi; Murata, Kunihiko; Ikariya, Takao
PA Mitsubishi Chemical Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2000256234	A	20000919	JP 1999-55790	19990303 <--
JP 3630002	B2	20050316		
PRAI JP 1999-55790		19990303		

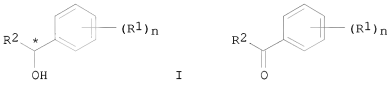
OS CASREACT 133:237676; MARPAT 133:237676
AB The title diols of formula R1C*H(OH)C*R2OH [R1, R2 = (un)substituted aromatic hydrocarbyl, aromatic heterocyclyl, or aliphatic hydrocarbyl; or R1 and R2 are bonded together to from a fused ring; * represents an asym. carbon atom] are prepared by asym. reduction of α-hydroxy ketone of formula R1COCHR3OH (R1, R2 = same as above) with chiral ligand containing group VB metal, group VIII metal compound, hydrogen donor, and base. This process provides simple and productive asym. synthesis of 1,2-diols of high optical purity. Thus, 150 mL 2-propanol and 7 mL Et3N were added to 7.66 g [RuCl2(p-cymene)]2 and 9.16 g (S,S)-N-p-toluenesulfonyldiphenylethylenediamine (TsDPEN), stirred at 80° under N, and ice-cooled to give 79% (S,S)-TsDPEN-Ru (I) as an orange crystal. Benzoin (2.12 g) was dissolved in 2 mL DMF with heating to 40°, followed by adding a solution of formic acid (2.04 g) and 2.64 g Et3N, purging the reaction solution with N, and adding a solution of 32 mg I in 0.3 mL DMF, and the resulting mixture was stirred at 40° for 24 h to give 63% (1R,2R)-1,2-diphenylethane-1,2-diol (>99% ee).

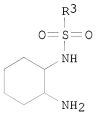
L5 ANSWER 39 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2000:529456 CAPLUS
DN 133:120139
TI Preparation of optically active α-alkylbenzyl alcohols
IN Ikariya, Takao

PA Mitsubishi Chemical Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000212110	A	20000802	JP 1999-18143	19990127 <--
PRAI	JP 1999-18143		19990127		

OS CASREACT 133:120139; MARPAT 133:120139
GI





III

AB Title compds. I (R1 = H, halo, alkyl, alkenyl, alkynyl, alkoxy, etc.; R2 = alkyl, cycloalkyl; n = 1-5) are prepared by asym. reduction of phenylalkylketones II (R1, R2, n = same as I) with H donors in the presence of catalysts containing Group 9 metal compds. and optically active cyclohexyldiamines III [R3 = lower alkyl, (un)substituted Ph]. M-trifluoromethylacetophenone was reduced in the presence of di-μ-chlorodichlorobis(pentamethylcyclopentadienyl)dirhodium(III)-(1R,2R)-N-(p-toluenesulfonyl)-1,2-cyclohexanediamine complex and potassium tetrabutoxide in isopropanol to give a product at 99.5% conversion with 97.4% e.e.

L5 ANSWER 40 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2000:514942 CAPLUS
DN 133:266962
TI Biomimetic catalysis with an immobilised chiral rhodium(III) complex
AU Polborn, Kurt; Severin, Kay
CS Institut fur Anorganische Chemie der Ludwig-Maximilians-Universitat, Munchen, D-81377, Germany
SO European Journal of Inorganic Chemistry (2000), (8), 1687-1692
CODEN: EJICFO; ISSN: 1434-1948
PB Wiley-VCH Verlag GmbH
DT Journal
LA English
OS CASREACT 133:266962
AB An organometallic transition state analog for the asym. reduction of acetophenone with a Cp*Rh complex was synthesized and structurally characterized - rac-[(C5Me5)Rh[OP(O)MePh](R,R-4-CH2:CHC6H4SO2NC6H10NH2)] (3). This complex has a chiral N,N'-chelate ligand with a styrene side chain to allow its incorporation into organic polymers. The remaining

coordination site is occupied by a methylphenylphosphinato ligand. This ligand acts as a pseudo substrate which mimics acetophenone. The conformation and configuration of 3 in the crystal are in excellent agreement with the postulated transition structure. Following the protocol of mol. imprinting, complex 3 was co-polymerized with ethylene glycol dimethacrylate in the presence of a porogen. The resulting polymer P3 was ground and sieved and the phosphinato ligand was substituted with a chloro ligand to generate a shape-selective cavity in proximity to the catalytically active metal center. When tested for its ability to catalyze the reduction of acetophenone and related substrates the imprinted polymer P3 showed a significantly higher activity than a control polymer P2 without a cavity. Excellent enantioselectivities (up to 95% ee) were obtained, with the catalyst P3 being more selective than the resp. control catalyst P2 (Aee = 2-9%). Competition expts. with acetophenone and a 2nd co-substrate revealed that the cavity generated with the phosphinato ligand is specific for acetophenone.

RE.CNT 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 41 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2000:468938 CAPLUS
DN 133:193095
TI Synthesis of simple enantiopure tetrahydro-β-carbolines and tetrahydroisoquinolines
AU Tietze, Lutz F.; Zhou, Yifa; Topken, Enno
CS Institut fur Organische Chemie der Georg-August-Universitat Gottingen, Gottingen, D-37077, Germany
SO European Journal of Organic Chemistry (2000), (12), 2247-2252
CODEN: EJOCFK; ISSN: 1434-193X
PB Wiley-VCH Verlag GmbH
DT Journal
LA English
OS CASREACT 133:193095
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Enantioselective hydrogenation of the imines I [R = CO2Et, CH2CO2Et, CH2CO2Me, CH(CO2Et)2] and II with the Ru complex (R,R)-III led to the tetrahydro-β-carbolines (1S)-IV (R = CH2CO2Et), (1R)-IV (R = CO2Et), and (1S)-IV (R = CH2CO2Me), and the tetrahydroisoquinoline (1S)-V with ee > 95%. By employing (S,S)-isomer of III the enantiomers are accessible. The imines I were obtained by oxidation of racemic IV with KMnO4 in > 58% yield. The crystal structure of (1R)-I (R = CH2CO2Et) was determined via its the Mosher acid derivative

RE.CNT 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 42 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2000:464936 CAPLUS
DN 133:73778
TI Preparation of optically active 1,2-diols
IN Okano, kazuya; Iwane, Hiroshi
PA Mitsubishi Chemical Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000191567	A	20000711	JP 1998-366564	19981224 <--
	JP 3603630	B2	20041222		
PRAI	JP 1998-366564		19981224		

OS CASREACT 133:73778; MARPAT 133:73778

AB HOCHR1CHR2OH [one group selected from R1 and R2 = (un)substituted aromatic hydrocarbyl, aromatic heterocyclyl, aliphatic hydrocarbyl; the other group = (un)substituted aliphatic hydrocarbyl; R1R2 may form ring] are prepared by asym. reduction of R1COCR2O (R1, R2 = same as above) with H donner in the presence of catalysts containing Group 8 metal compds. and R6NHCHR3CHR4NHR5 (R3, R4 = (un)substituted alkyl, aryl, aromatic heterocyclyl; R3R4 may form ring; R5, R6 = H, lower alkyl, acyl carbamoyl, thioacyl, thiocarbamoyl, alkyl, arylsulfonyl). 1,2-Cyclohexanedione was reduced with formic acid and Et3N in the presence of catalyst prepared from [RuCl2(p-cymene)]2 and (S,S)-N-p-toluenesulfonyldiphenylethylenediamine at room temperature for 48 h to give 1,2-cyclohexanediol with ratio of chiral isomer: meso isomer 59:41 at 99% conversion.

L5 ANSWER 43 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2000:379754 CAPLUS
DN 133:120192
TI Asymmetric hydrogen transfer protocol for a synthesis of (+)-frontalin and (-)-malyngolide
AU Kanada, Regina Mikie; Taniguchi, Takahiko; Ogasawara, Kunio
CS Pharmaceutical Institute, Tohoku University, Sendai, 980-8578, Japan
SO Tetrahedron Letters (2000), 41(19), 3631-3635
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier Science Ltd.
DT Journal
LA English
OS CASREACT 133:120192
AB An insect aggregate pheromone (+)-frontalin and a marine antibiotic (-)-malyngolide, both bearing a quaternary stereogenic center in their mols., have been synthesized in diastereocontrolled manner by employing a catalytic asym. hydrogen transfer reaction as the key step. An inversion protocol allowing enantioconvergent use of the other enantiomeric resolved product has also been devised.
RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 44 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2000:335846 CAPLUS
DN 133:89623
TI Studies of the Synthesis and Thermochemistry of Coordinatively Unsaturated Chelate Complexes (η5-C5Me5)IrL2 (L2 = TsNCH2CH2NTs, TsNCH2CO2, CO2CO2)
AU Grotjahn, Douglas B.; Lo, H. Christine; Dinoso, Jason; Adkins, Charles D.; Li, Chunbang; Nolan, Steven P.; Hubbard, John L.
CS Department of Chemistry, San Diego State University, San Diego, CA, 92182-1030, USA
SO Inorganic Chemistry (2000), 39(12), 2493-2499
CODEN: INOCAJ; ISSN: 0020-1669
PB American Chemical Society
DT Journal
LA English
AB A comparative synthetic, structural, and thermochem. study on a series of chelate complexes containing the fragment (η5-C5Me5)Ir [(η5-C5Me5)Ir(TsNCH2CH2NTs) (1), (η5-C5Me5)Ir(TsNCH2CO2) (2), (η5-C5Me5)Ir(CO2CO2) (3)] was performed to clarify the roles of carboxylato and sulfonamido ligands. Whereas 1 and 2 are monomeric in

solution and in the solid state, 3 appears to exist as an oligomer or polymer, (3)n, which can be broken up by addition of a ligand L such as a phosphine, CO, or 2-methoxypyridine to form (η5-C5Me5)Ir(L)(CO2CO2) (6). The synthesis of (3)n from [(η5-C5Me5)IrCl(μ-Cl)]2 required the use of silver oxalate in CH3CN, but if other solvents were used, the bridging oxalato complex (η5-C5Me5)IrCl(μ-η2-η2-C2O4)ClIr(η5-C5Me5) (7) was obtained and identified by x-ray diffraction. Enthalpies for reaction of THF-soluble monomers 1 and 2 with PMe3 were determined to be -28.7(0.5) and -28.5(0.4) kcal mol-1, resp. The oligomerization behavior of 3 may be a result of reduced σ- or π-donation of carboxylato ligands compared to N-tosylamido ligands, because the values for νCO in oxalato and bissulfonamido complexes 6-CO and (η5-C5Me5)Ir(CO)(TsNCH2CH2NTs) (4-CO) were 2064 and 2042 cm-1, resp.

RE.CNT 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 45 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2000:144555 CAPLUS
DN 132:194522
TI Preparation of aliphatic dienes for use in perfume formulation
IN Fujiwhara, Mitsuhiko; Nishikawa, Takenobu; Hori, Yoji; Hagiwara, Toshimitsu; Iwai, Hisao; Miura, Takashi
PA Takasago International Corporation, Japan
SO Eur. Pat. Appl., 35 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	EP 982286	A2	20000301	EP 1999-402131	19990826	<--
	EP 982286	A3	20010103			
	EP 982286	B1	20050223			
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
	JP 2000143571	A	20000523	JP 1998-321700	19981112	<--
	JP 3488103	B2	20040119			
	JP 2000226353	A	20000815	JP 1999-25781	19990203	<--
	JP 2000136152	A	20000516	JP 1999-194185	19990708	<--
	US 6239324	B1	20010529	US 1999-383920	19990826	<--
	ES 2237895	T3	20050801	ES 1999-402131	19990826	
	US 6323174	B1	20011127	US 2000-571549	20000516	<--
PRAI	JP 1998-240413	A	19980826			
	JP 1998-321700	A	19981112			
	JP 1999-25781	A	19990203			
	JP 1999-194185	A	19990708			
	US 1999-383920	A3	19990826			

OS CASREACT 132:194522; MARPAT 132:194522
AB Alkadienes, i.e. H2C:CHCH(R1)CH2CH:CHR2 (R1 = H, alkyl, alkenyl; R2 = Ph or substituted Ph, acyloxy), were prepared via ruthenium complex intermediates for use as perfume additives. Thus, H2C:CHCH(Me)CH2CH:CHOAc was prepared with 14% yield by reaction of vinyl acetate with chloro[(1,2,3,4-η)-2-methyl-1,3-butadiene][(1,2,3,4,5-η)-1,2,3,4,5-pentamethyl-2,4-cyclopentadien-1-yl]ruthenium (I). The ruthenium complex I was prepared by reaction of di-μ-chlorodichlorobis[(1,2,3,4,5-η)-1,2,3,4,5-pentamethyl-2,4-cyclopentadien-1-yl]diruthenium with isoprene. Perfume formulation of the prepared alkadienes were also presented.

L5 ANSWER 46 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2000:43330 CAPLUS
DN 132:93097

TI Method for preparation of optically active 1,2-diols by asymmetric hydrogen-transfer reduction of diketones
IN Okano, Kazuya; Shirasaki, Yoshikazu; Iwane, Hiroshi
PA Mitsubishi Chemical Industries Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000016954	A	20000118	JP 1998-184033	19980630 <--
	JP 3562322	B2	20040908		
PRAI	JP 1998-184033		19980630		

OS CASREACT 132:93097; MARPAT 132:93097
AB Asym. reduction of diketones R1COCOR2 (R1, R2 = aromatic hydrocarbyl or heterocyclyl optionally possessing substituents; or R1 and R2 are bonded or condensed to each other to form a ring) with a hydrogen donor in the presence of a group VIII metal compound and a chiral ethylenediamine ligand represented by formula R9C*H(NHR8)C*HR10NHR5 [R3, R4 = (un)substituted alkyl, Ph, or aromatic heterocyclyl; or R3 and R4 are bonded or condensed to each other to form a ring; R5, R6 = H, lower alkyl, acyl, CONH2, thioacyl, thiocarbamoyl, alkyl or arylsulfonyl] gives optically active 1,2-diols represented by formula R1CH(OH)CHR2OH in high yield with high stereoselectivity. Thus, 150 mL 2-propanol and 7 mL Et3N were added to 7.66 g [RuCl2(p-cymene)]2 and 9.16 g (S,S)-N-tosyl-1,2-diphenylethylenediamine and stirred at 80° under N for 1 h and ice-cooled to give 79% orange crystal. A solution of the latter crystal (153 mg) in 0.5 mL DMF was added to a 5:2 azeotropic mixture of formic acid and Et3N 18, Et3N 5.8, DMF 11.2 mL, and 10.8 g benzyl and stirred at room temperature for 72 h to give, after recrystn. from 92% ethanol, 70% (R,R)-1,2-diphenylethanediol of 97% optical purity.

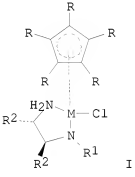
L5 ANSWER 47 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1999:803611 CAPLUS
DN 132:165963
TI Practical Asymmetric Synthesis of (S)-MA20565, a Wide-Spectrum Agricultural Fungicide
AU Tanaka, Ken; Katsurada, Manabu; Ohno, Fumihiko; Shiga, Yasushi; Oda, Masatsugu; Miyagi, Miwa; Takehara, Jun; Okano, Kazuya
CS Yokohama Research Center, Mitsubishi Chemical Corporation, Aoba-ku Yokohama Kanagawa, 227-8502, Japan
SO Journal of Organic Chemistry (2000), 65(2), 432-437
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
OS CASREACT 132:165963
AB A practical asym. synthesis of a wide-spectrum agricultural fungicide, (S)-MA20565 (1), is described. The convergent synthesis was achieved starting from com. available 3-(trifluoromethyl)aniline (7) in 44% overall yield through five steps and 2-bromobenzaldehyde (9) in 48% overall yield through four steps, resp. (S)-O-[1-(3-Trifluoromethylphenyl)ethyl]hydroxy lamine (2), a key intermediate of 1, was prepared via ruthenium(II)-catalyzed asym. transfer hydrogenation of 1-(3-trifluoromethylphenyl)ethanone (6) followed by chlorination using methanesulfonyl chloride and oxyamination using potassium acetohydroxamate with high level of stereocontrol.
RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 48 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1999:772610 CAPLUS
DN 132:22748
TI Preparation of cyclopentadiene transition metal complexes as catalysts for preparation of optically active benzyl alcohols
IN Majima, Kazushi; Tani, Kazuhide; Sayo, Noboru
PA Takasago Perfumery Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 11335385	A	19991207	JP 1998-153689	19980520 <--
PRAI JP 1998-153689		19980520		

OS CASREACT 132:22748; MARPAT 132:22748
GI



I

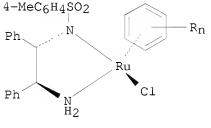
AB Optically active R4C6H4CH(OH)CH2R3 (R3 = H, lower alkyl; R4 = H, lower alkyl, lower alkoxy, halo, NH2, NMe2, CO2H, lower alkoxycarbonyl, NO2; R3R4 may form ring) are prepared by asym. H-transfer reduction of R4C6H4COCH2R3 (R3, R4 = same as above) in the presence of title complexes I [R = H, Me; 2R may form 6-membered ring; M = Rh, Ir, Co; R1 = MeSO2, CF3SO2, PhSO2, p-MeC6H4SO2, naphthalenesulfonyl, camphorsulfonyl; R2 = cyclohexyl, (substituted) Ph, naphthyl; 2R2 may form cyclohexane ring] or their base-(and i-PrOH-) treated products. [Cp*IrCl2]2 (Cp* = pentamethylcyclopentadienyl) was reacted with (S,S)-N-p-toluenesulfonyl-1,2-diphenylethylenediamine in THF in the presence of Et3N for 2 h to give 87% I (R = Me, M = Ir, R1 = p-MeC6H4SO2, R2 = Ph), which was used as a catalyst in reduction of PhCOMe in i-PrOH in the presence of KOH at room temperature for 24 h to give 40% (S)-1-phenylethanol with 90% ee.

L5 ANSWER 49 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1999:747407 CAPLUS
DN 131:336814
TI Preparation of optically active aromatic alcohols
IN Okano, Kazuya; Miyagi, Miwa; Iwane, Hiroshi
PA Mitsubishi Chemical Industries Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI JP 11322649 A 19991124 JP 1998-303951 19981026 <--
PRAI JP 1998-64994 A 19980316
OS CASREACT 131:336814; MARPAT 131:336814
AB Optically active R1CHR2OH [R1, R2 = (un)substituted aromatic hydrocarbyl; (un)saturated aliphatic hydrocarbyl, alicyclic hydrocarbyl, heterocyclic hydrocarbyl; R1R2 may form ring] are prepared by H-transfer asym. reduction of R1COR2 (R1, R2 = same as above) with 2.2 mol formic acid per mol of amines as H donor in the presence of transition metal catalysts and tertiary amines. M-trifluoromethylacetophenone was reduced with HCO2H in the presence of NEt3 and [RuCl2(cymene)]2 and p-toluenesulfonyldiphenylethylenediamine at room temperature for 25 h to give 97.8% S-1-(3-trifluoromethylphenyl)ethanol. with 92.2% e.e.

L5 ANSWER 50 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1999:567011 CAPLUS
DN 131:286219
TI A Practical Stereoselective Synthesis of Chiral Hydrobenzoins via Asymmetric Transfer Hydrogenation of Benzils
AU Murata, Kunihiko; Okano, Kazuya; Miyagi, Miwa; Iwane, Hiroshi; Noyori, Ryoji; Ikariya, Takao
CS Department of Applied Chemistry, Graduate School of Science and Engineering, Tokyo Institute of Technology and CREST Japan Science and Technology Corporation, Meguro-ku Tokyo, 152-8552, Japan
SO Organic Letters (1999), 1(7), 1119-1121
CODEN: ORLEF7; ISSN: 1523-7060
PB American Chemical Society
DT Journal
LA English
OS CASREACT 131:286219
GI

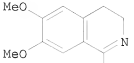


I

AB Asym. reduction of benzils with RuCl[(S,S)-Tsdpen](η6-arenes) I (Rn = H; 1-Me,4-i-Pr; 1,3,5-Me3; 1,2,3,4,5,6-Me6) in a mixture of formic acid and triethylamine proceeds with a substrate/catalyst molar ratio of 1000-2000 to give (R,R)-hydrobenzoins quant. with high diastereomeric (97% de) and enantiomeric purities (>99% ee). The benzoin intermediate with a chirally labile stereogenic center is converted to one major stereoisomer, the (R,R)-product, via dynamic kinetic resolution
RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 51 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1999:529904 CAPLUS
DN 131:299536
TI A Chiral Rhodium Complex for Rapid Asymmetric Transfer Hydrogenation of Imines with High Enantioselectivity
AU Mao, Jianmin; Baker, David C.
CS Department of Chemistry, The University of Tennessee, Knoxville, TN, 37996-1600, USA
SO Organic Letters (1999), 1(6), 841-843

CODEN: ORLEF7; ISSN: 1523-7060
PB American Chemical Society
DT Journal
LA English
OS CASREACT 131:299536
GI



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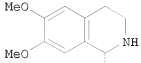
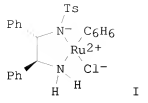


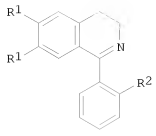
II

AB A chiral Rh complex, (R)-Cp*RhCl[(1S,2S)-p-TsNCHPhCHPhNH2] (1a, (S,S)-Cp*RhClTsDPEN), generated from [Cp*RhCl2]2 and (1S,2S)-N-p-toluenesulfonyl-1,2-diphenylethylenediamine [(S,S)-TsDPEN], and its enantiomer 1b provide superior catalysts for the rapid, high-yielding, asym. transfer hydrogenation of some heterocyclic imines, using an HCO2H-Et3N azeotrope as the H source. For example, dihydroisoquinoline I underwent asym. hydrogenation to give 96% tetrahydroisoquinoline (R)-II (99% ee) when the hydrogenation was conducted at a substrate/catalyst (S/C) molar ratio of 200:1 using a 5:2 formic acid-triethylamine azeotrope as the hydrogen source and the isolated crystalline complex 1a as catalyst in CH2Cl2 at 20° for 10 min. When the catalyst 1b was formed in situ prior to hydrogen, equivalent results were obtained. The catalysts were well behaved in a range of solvents, both protic and aprotic; however, the reactions gave slightly better enantioselectivity in polar solvents. Complex 1b was characterized by single-crystal x-ray diffraction anal.
RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

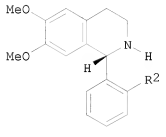
L5 ANSWER 52 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1999:516511 CAPLUS
DN 131:286387
TI Substituted Isoquinolines by Noyori Transfer Hydrogenation: Enantioselective Synthesis of Chiral Diamines Containing an Aniline Subunit
AU Vedejs, E.; Trapencieris, P.; Suna, E.
CS University of Wisconsin, Madison, WI, 53706, USA
SO Journal of Organic Chemistry (1999), 64(18), 6724-6729
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
OS CASREACT 131:286387
GI



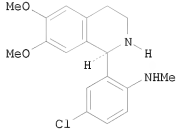
I



II



III



IV

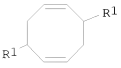
AB Transfer hydrogenation using the Noyori catalyst I is effective for the enantioselective hydrogenation of imines containing fully substituted nitrogen groups II [R1 = MeO; R2 = N(CH2OMe)(SO2Ar), N(SO2Ar)Bn (Ar = MeC6H4, 2-naphthyl, 1-naphthyl)]. Analogs such as II (R2 = ArSO2NH) could not be reduced in practical yield, apparently due to product inhibition of the catalyst. Asym. transfer hydrogenation of the aniline imine II (R1 = H, R2 = NH2) was possible, but required impractical purity levels for the substrate, and the nitro analog could not be reduced efficiently. The best results were obtained with the bromophenyl imine II (R1 = H, MeO; R2 = Br). In the case of II (R1 = MeO; R2 = Br), the product III was formed with 98.7% ee, and the material could be upgraded to >99% ee by crystallization of the hydrochloride salt. Reaction of III with NH3 or MeNH2 in the presence of Cu/CuCl gave the chiral anilines III (R1 = MeO; R2 = NH2, MeNH). III (R2 = MeNH) is comparable to the com. available IV as a chiral proton donor for amide enolates and provides access to the hitherto unavailable enantiomeric series.

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 53 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1999:481282 CAPLUS
DN 131:129705
TI Preparation of cyclooctadienes
IN Fujiwara, Mitsuhiko; Miura, Takashi; Hori, Yoji; Nishikawa, Takenobu
PA Takasago Perfumery Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11209314	A	19990803	JP 1998-313885	19980930 <--
PRAI	JP 1997-302306	A	19970930		

OS CASREACT 131:129705; MARPAT 131:129705
GI



I

AB Title compds. I (R1 = H, C1-3 alkyl, C2-3 alkenyl) are prepared by reaction of H2C:CHCR1:CH2 (R1 = same as I) in hydrophilic solvents in the presence of divalent Ru compds. Isoprene was cyclized in EtOH/H2O in the presence of (η5-pentamethylcyclopentadienyl)(η4-isoprene)ruthenium(II) chloride at 100° for 20 h to give 41% 3,7-dimethyl-1,5-cyclooctadiene.

L5 ANSWER 54 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1999:476750 CAPLUS
DN 131:257240
TI Oxidative resolution of 2-cyclopentenols by the asymmetric hydrogen transfer protocol
AU Iura, Yosuke; Sugahara, Tsutomu; Ogasawara, Kunio
CS Pharmaceutical Institute, Tohoku University, Sendai, 980-8578, Japan
SO Tetrahedron Letters (1999), 40(31), 5735-5738
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier Science Ltd.
DT Journal
LA English
OS CASREACT 131:257240
AB A RuII-chiral amine complex has accomplished oxidative resolution of the 2-cyclopentene-1-ols having a bicyclo[2.2.1]heptene background to afford the cyclopentenones and the cyclopentenols both in good to excellent optical and chemical yields by an asym. hydrogen transfer reaction. The hydrogen transfer occurred selectively at the allylic methine hydrogen even though allylic methylene hydrogens are present at the same relative position. The resolution of 3a,4,7,7a-tetrahydro-4,7-methano-1H-inden-1-ol in the presence of [N-[(1S,2S)-2-(amino-κN)-1,2-diphenylethyl]-4-methylbenzenesulfonamidato(2-)-κN][(1,2,3,4,5,6-η)-1-methyl-4-(1-methylethyl)benzene]ruthenium gave (-)-3a,4,7,7a-tetrahydro-4,7-methano-1H-inden-1-ol. The latter was readily transformed into (3aR,4S,7R,7aS)-3a,4,7,7a-tetrahydro-4,7-methano-1H-inden-1-one which is a synthetic precursor to (-)-pentenomycin I.
RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 55 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1999:343649 CAPLUS
DN 130:338270
TI Process for the preparation of trans-(R,R)-actinol
IN Crameri, Yvo; Puentener, Kurt; Scalone, Michelangelo
PA F. Hoffmann-La Roche A.-G., Switz.
SO Eur. Pat. Appl., 16 pp.
CODEN: EPXXDW
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 915076	A1	19990512	EP 1998-120544	19981030 <--
	EP 915076	B1	20020116		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

US 6187961	B1	20010213	US 1998-175784	19981020	<--
ES 2170443	T3	20020801	ES 1998-120544	19981030	<--
CA 2253888	A1	19990506	CA 1998-2253888	19981104	<--
BR 9804565	A	20000411	BR 1998-4565	19981105	<--
IN 188153	A1	20020824	IN 1998-MA2492	19981105	<--
CN 1223998	A	19990728	CN 1998-123951	19981106	<--
JP 11236345	A	19990831	JP 1998-315515	19981106	<--
CN 1550482	A	20041201	CN 2004-10003268	19981106	
US 6300509	B1	20011009	US 2000-705412	20001103	<--
IN 2000MA01109	A	20050617	IN 2000-MA1109	20001221	

PRAI EP 1997-119381 A 19971106
EP 1998-116697 A 19980903
US 1998-175784 A3 19981020
IN 1998-MA2492 A3 19981105

OS CASREACT 130:338270; MARPAT 130:338270

AB (R,R)-Actinol is prepared by transfer hydrogenation of (R)-levodione in presence of a hydrogen donor, such as Me2CHOH, and a catalyst RuH[L(-H)](Y) [L = neutral ligand; Y = monosulfonylated diamine]. Thus, (R)-levodione was reduced with Me2CHOH in presence of [Ru((S,S)-Ts-DPEN{-2H})(p-cymene)] [(S,S)-Ts-DPEN = H2NCHPhCHPhNHTs] to give (R,R)-actinol with an ee of 99.4%.

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 56 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1999:168161 CAPLUS
DN 130:296464
TI New Chiral Rhodium and Iridium Complexes with Chiral Diamine Ligands for Asymmetric Transfer Hydrogenation of Aromatic Ketones
AU Murata, Kunihiko; Ikariya, Takao; Noyori, Ryoji
CS Department of Chemical Engineering Faculty of Engineering, Tokyo Institute of Technology and CREST, Tokyo, 152-8552, Japan
SO Journal of Organic Chemistry (1999), 64(7), 2186-2187
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
OS CASREACT 130:296464

AB Title complexes were prepared and characterized. The complexes catalyzed the stereoselective transfer hydrogenation of Ph ketones with Me2CHOH to give the 1-phenylalkanols in high yield and ee.

RE.CNT 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 57 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1999:83161 CAPLUS
DN 130:222808
TI Ruthenium complexes containing diamine-based ligands as catalysts for insertion of carbenes into O-H bonds of alcohols
AU Simal, Francois; Demonceau, Albert; Noels, Alfred F.
CS Laboratory of Macromolecular Chemistry and Organic Catalysis, C.E.R.M., University of Liege, Liege, B-4000, Belg.
SO Tetrahedron Letters (1999), 40(1), 63-66
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier Science Ltd.
DT Journal
LA English

AB Ruthenium complexes with N-(p-toluenesulfonyl)diamine ligands are efficient catalysts for insertion of carbenes generated from diazo compds. into O-H bonds of alcs. The insertion reaction of Et diazoacetate into the O-H bond of allyl alc. gave (2-propenyloxy)acetic acid Et ester in 80% yield in the presence of [N-[2-(amino-κN)ethyl]-4-

methylbenzenesulfonamidato-κN]chloro[(1,2,3,4,5,6-η)-1-methyl-4-(1-methylethyl)benzene]ruthenium as catalyst. Primary alcs. were more reactive than secondary alcs.
RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

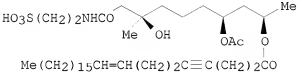
L5 ANSWER 58 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1998:805479 CAPLUS
DN 130:139438
TI The half-sandwich hydride and 16-electron complexes of rhodium and iridium containing (1S,2S)-N-(p-toluenesulfonyl)-1,2-diphenylethylenediamine: relevant to asymmetric transfer hydrogenation
AU Mashima, Kazushi; Abe, Tomoyuki; Tani, Kazuhide
CS Department of Chemistry, Graduate School of Engineering Science, Osaka University, Osaka, 560-8531, Japan
SO Chemistry Letters (1998), (12), 1201-1202
CODEN: CMLTAG; ISSN: 0366-7022
PB Chemical Society of Japan
DT Journal
LA English
AB The half-sandwich hydride and 16-electron complexes of Rh and Ir bearing an anion of (1S,2S)-N-(p-toluenesulfonyl)-1,2-diphenylethylenediamine were prepared For the Ir catalyst system, a 16-electron complex 2b and an 18-electron, hydride complex 3b were synthesized, while only a 16-electron complex 2a was detected for the Rh catalyst.
RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 59 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1998:805478 CAPLUS
DN 130:125206
TI Asymmetric transfer hydrogenation of ketonic substrates catalyzed by (η5-C5Me5)MCl complexes (M = Rh and Ir) of (1S,2S)-N-(p-toluenesulfonyl)-1,2-diphenylethylenediamine
AU Mashima, Kazushi; Abe, Tomoyuki; Tani, Kazuhide
CS Department of Chemistry, Graduate School of Engineering Science, Osaka University, Osaka, 560-8531, Japan
SO Chemistry Letters (1998), (12), 1199-1200
CODEN: CMLTAG; ISSN: 0366-7022
PB Chemical Society of Japan
DT Journal
LA English
OS CASREACT 130:125206
AB The Rh and Ir [i.e., (η5-C5Me5)MCl, M = Rh, Ir] complexes of (1S,2S)-N-(p-toluenesulfonyl)-1,2-diphenylethylenediamine are catalyst precursors for asym. transfer hydrogenation of acetophenone, 2-acetonaphthone, 1-tetralone, and 1-indanone to give (S)-1-phenylethanol (90% ee), (S)-1-(2-naphthyl)ethanol (85% ee), (S)-1-tetralol (97% ee), and (S)-indanol (99% ee), resp.
RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

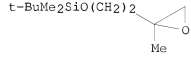
L5 ANSWER 60 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1998:778865 CAPLUS
DN 130:104302
TI Structures, electrochemical and spectroscopic properties of ternary ruthenium(II)-polypyridyl complexes with additional carboxylate, biguanide or sulfonamide donors
AU Couchman, Samantha M.; Dominguez-Vera, Jose M.; Jeffery, John C.; McKee, Colin A.; Nevitt, Simon; Pohlman, Matthias; White, Claire M.; Ward, Michael D.
CS School of Chemistry, University of Bristol, Bristol, BS8 1TS, UK

SO Polyhedron (1998), 17(20), 3541-3550
CODEN: PLYHDE; ISSN: 0277-5387
PB Elsevier Science Ltd.
DT Journal
LA English
AB The following complexes were prepared: [Ru(bipy)2(pic)][PF6] (bipy = 2,2'-bipyridine; Hpic = picolinic acid); [Ru(terpy)(dipic)] (1, terpy = 2,2':6',2''-terpyridine; H2dipic = dipicolinic acid); [Ru(bipy)2(Hbig)][PF6]2 (2, Hbig = biguanide); and [Ru(bipy)2(apps)][PF6] (3, Happs = p-tolylsulfonamide of 2-(2-aminophenyl)-pyridine). The latter three were characterized by x-ray crystallog. and are all mononuclear pseudo-octahedral complexes. Crystal data: 1·H2O·Et2O, orthorhombic, space group Fddd, R1 = 0.0548; 2·MeCN, triclinic, space group P.hivin.1, R1 = 0.0342; 3·CH2Cl2, monoclinic, space group P21/c, R1 = 0.0407. Electrochem. studies reveal the relation between the potentials of the metal-based Ru(II)/Ru(III) couple, with the potential values being clearly related to the σ-donor or π-acceptor capabilities of the ligands. The energies of the lowest-energy MLCT maxima in the electronic spectra also correlate with ligand properties. [Ru(bipy)2(Hbig)][PF6]2, which has a dissociable proton on the biguanide ligand, undergoes deprotonation in strongly basic conditions (pKa = 12.3 ± 0.2), which results in a red shift of the MLCT transition consistent with weakening of the ligand field due to the increased π-donor capability of the deprotonated ligand.
RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 61 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1998:752622 CAPLUS
DN 130:110074
TI Enantioselective Total Synthesis of Taurospongin A
AU Lebel, Helene; Jacobsen, Eric N.
CS Department of Chemistry and Chemical Biology, Harvard University, Cambridge, MA, 02138, USA
SO Journal of Organic Chemistry (1998), 63(26), 9624-9625
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
OS CASREACT 130:110074
GI



Me(CH2)15CH=CH(CH2)2C≡C(CH2)2CO I



II

AB The first total synthesis of (Z)-taurospongin A (I), a fatty acid derivative from the sponge Hippospongia, via the use of highly effective asym. catalytic reactions to set each stereocenter independently was achieved. The preparation of(Z)-I in 6% overall yield was accomplished in 14 steps from

(±)-epoxide II including kinetic resolution
RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 62 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1998:586267 CAPLUS
DN 129:260221
TI Preparation of acetylene group-containing optically active alcohols from acetylene group-containing carbonyl compounds
IN Ikariya, Takao; Matsumura, Kazuhiko; Hashiguchi, Shohei; Noyori, Ryoji
PA Foundation for Scientific Technology Promotion, Japan; Takeda Chemical Industries, Ltd.; Takasago Perfumery Co., Ltd.; Nippon Kokan Co., Ltd.
SO Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 10236986	A	19980908	JP 1997-38241	19970221 <--
JP 3159661	B2	20010423		
PRAI JP 1997-38241		19970221		

OS CASREACT 129:260221; MARPAT 129:260221
AB The title alcs. are prepared by asym. hydrogenation of acetylene group-containing carbonyl compds. in the presence of (in)organic H donors and (i) tricomponent catalysts comprising transition metal complexes (TMC), bases, and N-containing optically active compds. (OAN), (ii) bicomponent catalysts comprising transition metal-OAN complexes and bases, or (iii) complexes formed from TMC, OAN, and bases. (1S,2S)-N-p-toluenesulfonyl-1,2-diphenylethylenediamine was treated with [RuCl2(η6-mesitylene)]2 in 2-propanol (I) at 28° for 20 min, then treated with 4-phenyl-3-butyn-2-one, I, and KOH/I for 18 h to give 90% (S)-4-phenyl-3-butyn-2-ol with 97% ee.

L5 ANSWER 63 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1998:330816 CAPLUS
DN 129:67518
TI Synthesis and evaluation of ruthenium catalysts containing diamine-based ligands in olefin cyclopropanation
AU Simal, Francois; Demonceau, Albert; Noels, Alfred F.
CS Laboratory of Macromolecular Chemistry and Organic Catalysis, C.E.R.M., University of Liege, Liege, B-4000, Belg.
SO Tetrahedron Letters (1998), 39(21), 3493-3496
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier Science Ltd.
DT Journal
LA English
OS CASREACT 129:67518
AB Ruthenium complexes with N-(p-toluenesulfonyl) diamine ligands were found to be efficient in the catalytic cyclopropanation reaction of olefins with alkyl diazoacetates.
RE.CNT 64 THERE ARE 64 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 64 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1997:603412 CAPLUS
DN 127:247708
TI Asymmetric Transfer Hydrogenation of α,β-Acetylenic Ketones
AU Matsumura, Kazuhiko; Hashiguchi, Shohei; Ikariya, Takao; Noyori, Ryoji
CS ERATO Molecular Catalysis Project, Japan Science and Technology Corporation, Toyota, 470-03, Japan

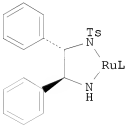
SO Journal of the American Chemical Society (1997), 119(37), 8738-8739
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
OS CASREACT 127:247708
AB A range of achiral α,β-acetylenic ketones is converted to propargylic alcs. with high enantiomeric excess and in high yield by transfer hydrogenation using 2-propanol as the hydrogen donor. The asym. reaction using arene-Ru(II) catalysts modified with (R,R)- or (S,S)-N-p-toluenesulfonyl-1,2-diphenylethylenediamine proceeds with a substrate/catalyst molar ratio of 100-1000 under neutral conditions and at room temperature, allowing chemo- and enantioselective saturation of the carbonyl function while leaving the acetylenic linkage intact. β-Amino alcs. such as (1S,2S)-2-(methylamino)-1,2-diphenylethanol are also usable as chiral auxiliaries. The enantiomeric purity of the propargylic alcs. is consistently high regardless of the bulkiness of substituents. Reduction of chiral alkynyl Cbz-aminoalkyl ketones gives the enantiomerically pure alcs. with contiguous stereogenic carbons, where the carbonyl faces are differentiated by the chirality of the Ru catalyst.
RE.CNT 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 65 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1997:467761 CAPLUS
DN 127:94864
TI Process for preparing optically active alcohols and amines
IN Ikariya, Takao; Hashiguchi, Shohei; Takehara, Jun; Uematsu, Nobuyuki; Matsumura, Kazuhiko; Noyori, Ryoji; Fujii, Akio; et al.
PA Japan Science and Technology Corporation, Japan; NKK Corporation; Takeda Chemical Industries, Ltd.; Asahi Kasei Kogyo Kabushiki Kaisha; Takasago International Corporation
SO PCT Int. Appl., 90 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 9720789	A1	19970612	WO 1996-JP3573	19961206	<--
	W: CA, US					
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE					
	JP 09157196	A	19970617	JP 1995-318303	19951206	<--
	JP 2962668	B2	19991012			
	JP 09157228	A	19970617	JP 1995-318304	19951206	<--
	JP 2912572	B2	19990628			
	JP 10130289	A	19980519	JP 1996-284233	19961025	<--
	JP 3040353	B2	20000515			
	CA 2239970	A1	19970612	CA 1996-2239970	19961206	<--
	CA 2239970	C	20060221			
	EP 916637	A1	19990519	EP 1996-941186	19961206	<--
	EP 916637	B1	20050420			
	R: DE, FR, GB					
	EP 1300381	A1	20030409	EP 2002-25508	19961206	
	EP 1300381	B1	20060308			
	R: DE, FR, GB					
	US 6184381	B1	20010206	US 1998-77787	19980929	<--
	US 6887820	B1	20050503	US 2000-661560	20000914	
PRAI	JP 1995-318303	A	19951206			
	JP 1995-318304	A	19951206			

JP 1996-284233 A 19961025
EP 1996-941186 A3 19961206
WO 1996-JP3573 W 19961206
US 1998-77787 A3 19980929
OS CASREACT 127:94864; MARPAT 127:94864
AB This document describes a novel and practically excellent process for preparing optically active compds., such as optically active alcs. or amines R1R2CHW [R1, R2 = (un)substituted hydrocarbon moiety, etc.; W = OH, NH2, etc.] , useful for various applications, for example, as synthetic intermediates of pharmaceuticals, liquid crystalline materials, and reagents for optical resolution, wherein a hydrogen transfer type asym. reduction is carried out in the presence of both a transition metal complex and an optically active nitrogen compound or a transition metal complex having an optically active nitrogen compound as an asym. ligand, and a hydrogen-donating organic or inorg. compound Further, optically active secondary alcs. are prepared from racemic secondary alcs. or meso-diols by a hydrogen transfer oxidation Asym. reduction of acetophenone by the title process gave (S)-1-phenylethanol in 98% ee.

L5 ANSWER 66 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1997:142099 CAPLUS
DN 126:263647
TI Kinetic resolution of racemic secondary alcohols by RuII-catalyzed hydrogen transfer
AU Hashiguchi, Shohei; Fujii, Akio; Haack, Karl-Josef; Matsumura, Kazuhiko; Ikariya, Takao; Noyori, Ryoji
CS ERATO Molecular Catalysis Project, Res. Development Corporation Japan, Toyota, 470-03, Japan
SO Angewandte Chemie, International Edition in English (1997), 36(3), 288-290
CODEN: ACIEAY; ISSN: 0570-0833
PB VCH
DT Journal
LA English
OS CASREACT 126:263647
GI

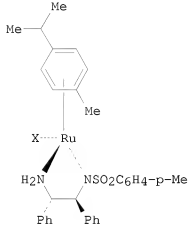


I

AB Chiral Ru(II) complexes (S,S)-I (L = p-cymene, mesitylene) catalyzed the kinetic resolution of racemic secondary alcs. [e.g., p-RC6H4CHMeOH (R = H, MeO, Me2N), PhCH:CHCHMeOH, 1-(hydroxyethyl)ferrocene, 1-tetralol, 1-indanol, etc.] by transfer hydrogenation in Me2CO. The S enantiomer was converted to the corresponding ketone, leaving the unreacted R enantiomer in 92-99% e.e. at .apprx.50% conversion.
RE.CNT 67 THERE ARE 67 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 67 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1997:142095 CAPLUS

DN 126:238462
TI The catalyst precursor, catalyst and intermediate in the RuII-promoted asymmetric hydrogen transfer between alcohols and ketones
AU Haack, Karl-Josef; Hashiguchi, Shohei; Fujii, Akio; Ikariya, Takao; Noyori, Ryoji
CS ERATO Molecular Catalysis Project, Res. Development Corporation Japan, Toyota, 470-03, Japan
SO Angewandte Chemie, International Edition in English (1997), 36(3), 285-288
CODEN: ACIEAY; ISSN: 0570-0833
PB VCH
DT Journal
LA English
OS CASREACT 126:238462
GI



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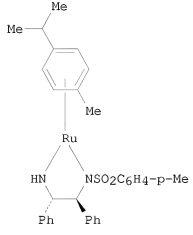


II

AB The complexes I (X = Cl, H) and II were prepared, characterized by x-ray crystallog., and studied with respect to asym. hydrogen transfer between alcs. and ketones. I (X = Cl), which catalyzes the asym. transfer hydrogenation of acetophenone in 2-propanol containing KOH, is merely a catalyst precursor that undergoes HCl elimination to give the true catalyst II. II shows distinct dehydrogenative activity for MeOH, EtOH, and 2-propanol and catalyzes the asym. reduction of acetophenone in 2-propanol without KOH to afford (S)-1-phenylethanol in up to 95% ee. I (X = H) is an intermediate in the H transfer reaction.
RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 68 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1996:268475 CAPLUS
DN 125:58824
TI Asymmetric Transfer Hydrogenation of Imines
AU Uematsu, Nobuyuki; Fujii, Akio; Hashiguchi, Shohei; Ikariya, Takao; Noyori, Ryoji
CS ERATO Molecular Catalysis Project, Research Development Corporation of Japan, Toyota, 470-03, Japan
SO Journal of the American Chemical Society (1996), 118(20), 4916-17
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society

DT Journal
LA English
OS CASREACT 125:58824
AB Ruthenium(II) complexes, e.g. (R)-RuCl[(1S,2S)-p-TsNCH(C6H5)CH(C6H5)NH2](η6-p-cymene), which were modified by arene ligands and chiral N-arenesulfonylated 1,2-diamine auxiliaries, catalyzed the asym. reduction of prochiral imines with a formic acid-triethylamine mixture to give secondary amines with a high enantiomeric purity. The reaction was conducted in an aprotic dipolar solvent at 28° with a substrate/catalyst molar ratio of 100-1000. This method saturated C:N bonds preferentially over C:O and C:C linkages. A variety of cyclic imines and some acyclic imines can be used as substrates. This asym. catalysis provides a new way to isoquinoline and indole alkaloids.

L5 ANSWER 69 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1996:121491 CAPLUS
DN 124:260042
TI Ruthenium(II)-Catalyzed Asymmetric Transfer Hydrogenation of Ketones Using a Formic Acid-Triethylamine Mixture
AU Fujii, Akio; Hashiguchi, Shohei; Uematsu, Nobuyuki; Ikariya, Takao; Noyori, Ryoji
CS Molecular Catalysis Project, Research Development Corporation of Japan, Toyota, 470-03, Japan
SO Journal of the American Chemical Society (1996), 118(10), 2521-2
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
OS CASREACT 124:260042
AB (R)-RuCl[(1S,2S)-p-CH3C6H4SO2NCHPhCHPhNH2](η6-mesitylene) or the enantiomer efficiently catalyzes asym. reduction of prochiral ketones in a 5:2 formic acid-NEt3 azeotropic mixture with a substrate:catalyst molar ratio of 200-1000 to give the corresponding secondary alcs. with a high enantiomeric purity. This transfer hydrogenation can be characterized by irreversibility, which contrasts with the conventional reaction that uses iso-PrOH as a H donor. The reaction proceeds with truly kinetic enantioface discrimination to completion with a substrate concentration ≤2-10 M. A variety of aromatic ketones including p-methoxyacetophenone and 2,3-benzo-2-cycloalkenones are usable as substrates. The reduction occurs preferentially at a keto function without affecting an olefinic linkage, ester, furan ring, sulfide and sulfone group, aryl chloride and cyanide, thiophene and quinoline ring. The utility was demonstrated by enantioselective synthesis of some chiral alcs. which serve as key intermediates for biol. significant compds.

L5 ANSWER 70 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1995:701698 CAPLUS
DN 123:199119
TI Formation and Structure of Coordinatively Unsaturated CpIr-Amino Acid Complexes. Kinetic and Thermodynamic Control in Highly Diastereoselective Complexation Reactions
AU Grotjahn, D. B.; Groy, T. L.
CS Department of Chemistry and Biochemistry, Arizona State University, Tempe, AZ, 85287-1604, USA
SO Organometallics (1995), 14(8), 3669-82
CODEN: ORGND7; ISSN: 0276-7333
PB American Chemical Society
DT Journal
LA English
OS CASREACT 123:199119
AB Amino acid derivs. bearing an electron-withdrawing group Z on N (Z =

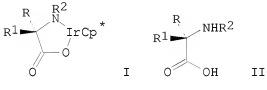
tosyl, CO2CH2Ph, or acetyl) serve as (N,O)-chelating, dianionic ligands to the fragment Cp*Ir (Cp* = η5-pentamethylcyclopentadienyl). Six such complexes have been prepared, all of them coordinatively unsatd. yet air-stable. The structure of the N-tosylglycine derivative C19H24IrNO4S (5a) was analyzed at 20°. A planar chelate ring was revealed, and relatively short Ir-N and Ir-O bonds suggested stabilization of unsatd. Ir by π-donation. Crystals of the (R)-N-tosylphenylglycine complex C25H28IrNO4S (5f) were monoclinic. Some distortion of the chelate ring was seen, and both aryl rings were syn, the angle between their mean planes being 19°. Within seconds, red solns. of the unsatd. complexes turn yellow on addition of ligands such as phosphines, CO, and primary aliphatic or heterocyclic amines. Ligands add to chiral complexes so as to place the amino acid side chain R and Cp* cis to each other on the metallacycle, suggesting preferred approach of the ligand to 5 from the side opposite R. For one PMe3 adduct this was the result of kinetic control (≥50:1 selectivity at 25°) and thermodn. control (40:1 selectivity after equilibration at 90°, half-life = 5 h). PPh3 and amines exchange within minutes at 25°. The stereoselectivity of ligand addition was highest for smaller ligands. Comparing this result and previous work suggests that steric interactions between added ligand and the amino acid side chain R determine diastereoselectivity.

L5 ANSWER 71 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1995:683286 CAPLUS
DN 123:169085
TI Asymmetric Transfer Hydrogenation of Aromatic Ketones Catalyzed by Chiral Ruthenium(II) Complexes
AU Hashiguchi, Shohei; Fujii, Akio; Takehara, Jun; Ikariya, Takao; Noyori, Ryoji
CS ERATO Molecular Catalysis Project, Research Development Corporation of Japan, Toyota, 470-03, Japan
SO Journal of the American Chemical Society (1995), 117(28), 7562-3
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
OS CASREACT 123:169085
AB A chiral Ru(II) complex, prepared from [RuCl2(η6-mesitylene)]2 and (1S,2S)-N-p-toluenesulfonyl-1,2-diphenylethylenediamine, effects a highly enantioselective transfer hydrogenation of various aromatic alkyl ketones by iso-PrOH. The reduction of acetophenone in a 0.1M solution of iso-PrOH containing the Ru catalyst (substrate/catalyst (S/C) mole ratio = 200) and KOH (5 equiv to Ru atom) proceeds at room temperature to give (S)-1-phenylethanol in 97% ee and 95% yield. The enantioselectivity is slightly lowered as the reaction proceeds owing to the reversibility of the transfer hydrogenation. In a similar manner, a range of simple aromatic ketones (S/C = 200-500) are convertible to secondary alcs. with high enantiomeric purity. A relevant catalyst precursor was obtained by reacting [RuCl2(η6-benzene)]2 and (1S,2S)-N-trifluoromethanesulfonyl-1,2-diphenylethylenediamine in a 1:4 mol ratio in iso-PrOH. The mol. structure was determined by single-crystal x-ray anal.

L5 ANSWER 72 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1995:504081 CAPLUS
DN 123:159805
TI Coordination of chiral amines to coordinatively unsaturated Cp*-Ir-amino acid complexes allows determination of enantiomeric purity
AU Grothjan, Douglas B.; Joubran, Camil
CS Department of Chemistry and Biochemistry, Arizona State University, Tempe, AZ, 85287-1604, USA

SO Tetrahedron: Asymmetry (1995), 6(3), 745-52
CODEN: TASYE3; ISSN: 0957-4166
PB Elsevier
DT Journal
LA English
AB Coordinatively unsatd. complexes of the Cp*Ir fragment to the dianion of N-tosylamino acids combine with chiral amines in a highly diastereoselective fashion, such that metallacycle substituents R (amino acid side chain) and Cp* are cis. Observation of adducts between the alanine- and phenylglycine-derived complexes and (S)-α-methylbenzylamine by NMR at low to ambient temperature allows determination of the enantiomeric purity of either component, 1 to 2% impurity being easily detectable. Also, α-methylbenzylamine was analyzed for its enantiomeric purity independent of external chiral reagent, by its conversion to N,N'-bis(1-phenylethyl)urea.

L5 ANSWER 73 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1994:580143 CAPLUS
DN 121:180143
TI Formation of Coordinatively Unsaturated Cp*Ir-Amino Acid Complexes and Their Highly Diastereoselective Complexation Reactions
AU Grotjahn, D. B.; Groy, T. L.
CS Department of Chemistry and Biochemistry, Arizona State University, Tempe, AZ, 85287-1604, USA
SO Journal of the American Chemical Society (1994), 116(15), 6969-70
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA English
OS CASREACT 121:180143
GI



I II

AB The title complexes I (e.g., R = H, R1 = H, Ph; R2 = tosyl; Cp* = pentamethylcyclopentadienyl) were prepd by treating II with [Cp*IrCl(μ-Cl)]2. The ligand addition reactions of chiral I proceed with high stereoselectivity.

L5 ANSWER 74 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1989:608691 CAPLUS
DN 111:208691
TI Synthesis and biological evaluation of new rhodium(I) complexes with sulfonamide derivatives
AU Craciunescu, George; Scarcia, Vito; Furlani, Ariella; Parrondo Iglesias, Esther; Ghirvu, Costantin; Papaioannou, Aristotelis
CS Fac. Pharm., Univ. Madrid, Madrid, 28040, Spain
SO Anticancer Research (1989), 9(3), 781-5
CODEN: ANTRD4; ISSN: 0250-7005
DT Journal
LA English
AB New rhodium(I) complexes, belonging to the general structure [Rh(CO)2(L)], where L were sulfonamide derivs., were synthesized and characterized by

chemical anal. and IR detns. These complexes were assayed as cytostatic and antitumor agents in vitro against KB cells and in vivo against P388, Ehrlich ascites, and advanced B16 melanoma. Assays against 3 Trypanosoma strains were also performed. Among the new compds., the [Rh(CO)2(sulfamethoxydiazine)] appeared to be active in all biol. systems without showing evident nephrotoxicity. Relationships between biol. activity and π electronic charge localization on N atom of the ligand amidic group are also discussed.

L5 ANSWER 75 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1985:463844 CAPLUS
DN 103:63844
OREF 103:10133a,10136a
TI Rhodium(III), palladium(II) and platinum(II) complexes of bis(o-aminobenzenesulfonyl)ethylenediamine
AU Perlepes, Spyros P.; Tsangaris, John M.
CS Chem. Dep., Univ. Ioannina, Ioannina, Greece
SO Monatshefte fuer Chemie (1985), 116(5), 603-6
CODEN: MOCMB7; ISSN: 0026-9247
DT Journal
LA English
AB K3[RhL3].2H2O, [PdL].H2O and [M(LH2)Cl2] [M = Pd, Pt; LH2 = bis(o-aminobenzenesulfonyl)ethylenediamine] were prepared and characterized by conductivity measurements, thermogravimetric anal., x-ray powder patterns and
IR, ligand field and 1H-NMR spectroscopy.

L5 ANSWER 76 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1975:443482 CAPLUS
DN 83:43482
OREF 83:6891a,6894a
TI Isocyanate, urea, and amide complexes from the reactions of organic azides with low oxidation state complexes of transition metals
AU Cenini, S.; Pizzotti, M.; Porta, F.; La Monica, G.
CS Ist. Chim. Gen., Cons. Naz. Ric. Cent., Milan, Italy
SO Journal of Organometallic Chemistry (1975), 88(2), 237-48
CODEN: JORCAI; ISSN: 0022-328X
DT Journal
LA English
AB The reactions of organic azides RN3 (R = p-MeC6H4SO2, p-MeC6H4CO, Bz, 2-carbonylfuran) with Ru(CO)3(PPh3)2 in benzene gave isocyanate, Ru(CO)2(PPh3)2(RNCO), urea, Ru(CO)2(PPh3)2(RNCONR) or amides, Ru(CO)2(PPh3)2(NHR)2, depending on the reaction conditions and on the nature of R. The urea complex (R = p-MeC6H4SO2) was also obtained by the oxidative addition of N,N'-ditoluene-p-sulfonylurea or toluene-p-sulfonyl isocyanate to Ru(CO)3(PPh3)2. The isocyanate derivative with R = Bz was protonated by fluoboric acid to give the corresponding carbamoyl complex, [Ru(CO)2(PPh3)2(CONHR)]+BF4- which on treatment with LiCl gave the non-ionic derivative [Ru(CO)(PPh3)2(CONHR)Cl]n. Analogous reactions were studied with the complexes Ru3(CO)9L3 (L = CO, PPh3), but the only characterizable product was the monomeric Ru(CO)2L2(RNCONR) (L = PPh3, R = p-MeC6H4SO2). Attempted cycloaddn. reactions in benzene of the azides to coordinated ligands L other than carbon monoxide, such as CS2, PhNCS, alkenes, in the complexes Pt(PPh3)2L or SO2 in Pt(PPh3)3SO2 were unsuccessful. Only in protic solvents was a clean reaction observed (L = CH2:CHCN), giving the known complex Pt(PPh3)2(N3)(NHR) (R = p-MeC6H4SO2). Similarly, the complexes Pd(L-L)(dba) (L-L = 2,2'-bipyridyl, o-phenanthroline, dba = dibenzylideneacetone), on treatment with RN3 in EtOH gave the new amides Pd(L-L)(X)(NHR), (X = NHR, R = p-MeC6H4SO2; X = N3, R = p-MeC6H4CO).

L5 ANSWER 77 OF 77 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1974:127652 CAPLUS
DN 80:127652
OREF 80:20515a,20518a
TI Reactions of toluene-p-sulfonyl azide and isocyanate with low valent transition-metal complexes
AU Beck, Wolfgang; Rieber, Wolfram; Cenini, Sergio; Porta, Francesca; La Monica, Girolamo
CS Inst. Anorg. Chem., Univ. Muenchen, Munich, Fed. Rep. Ger.
SO Journal of the Chemical Society, Dalton Transactions: Inorganic Chemistry (1972-1999) (1974), (3), 298-304
CODEN: JCDTBI; ISSN: 0300-9246
DT Journal
LA English
AB Pd(CO)(PPh3)3 and M(CO)(NO)(PPh3)2 (M = Rh, Ir) reacted with RN3 (R = p-MeC6H4SO2) in C6H6 to give chelate complexes Pd(PPh3)2(RNCONR) and M(NO)(PPh3)2(RNCONR), resp. Pt(PPh3)2(RNCONR) was prepared by oxidative addition of RHNCONHR to Pt(PPh3)4, but reaction of Pt(PPh3)n(CO)4-n (n = 2, 3) with RN3 gave Pt(PPh3)2(R2N4CO). The urea complexes were also prepared by treatment of M(PPh3)4 (M = Pd, Pt) or M(NO)(PPh3)3 (M = Rh, Ir) with RNCO. RhCl(PPh3)2(RNCONR) was isolated from the reactions of Rh(PPh3)3Cl with RNCO or RHNCONHR. In protic solvents such as R1OH (R1 = Me, Et, Pr), reaction of RN3 with Pt(PPh3)n(CO)4-n (n = 2, 3) gave trans-Pt(PPh3)2(CO2R1)2 for n = 2 and Pt(PPh3)2N3(NRCO2R1) for n = 3. Reaction of RhH[Ph2P(CH2)2PPh2]2 with RN3 gave a dimeric complex, probably with a diimide bridge.

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CA SUBSCRIBER PRICE	-61.60	-61.60

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